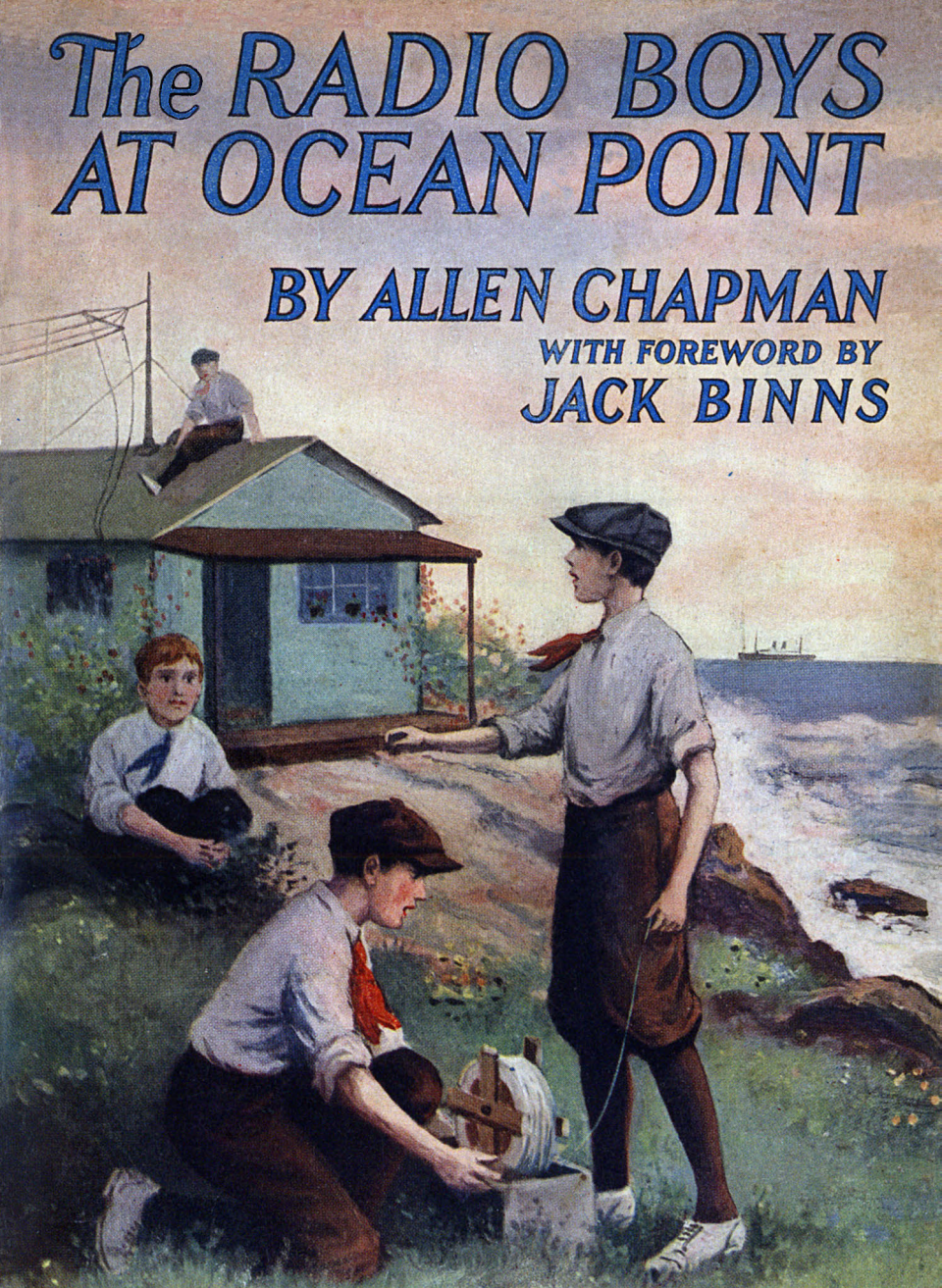
The RADIO BOYS AT OCEAN POINT

BY ALLEN CHAPMAN

WITH FOREWORD BY
JACK BINNS



THE RADIO BOYS SERIES
(TRADEMARK REGISTERED)

THE RADIO BOYS SERIES

(Trademark Registered)

THE RADIO BOYS AT OCEAN POINT;

Or, The Message That Saved the Ship

By ALLEN CHAPMAN

Author of
"The Railroad Series," Etc.,

With a
FOREWORD BY JACK BINNS

The action of this volume takes place at the seashore, wither the Radio Boys have gone for their summer vacation. They set up their radio receiving set on the shore and get great pleasure out of it. They become acquainted with the operator at a big wireless station and during a big storm this operator is attacked and robbed. With the operator senseless there is nobody to run the station until the Radio Boys take hold. Then comes in a call for aid from a steamer upon which some of their friends and relatives are passengers. What the boys did in this awful emergency makes reading that nobody, young or old, would care to miss.

This book gives a large amount of up-to-date radio information.

THE RADIO BOYS SERIES

(Trademark Registered)

By ALLEN CHAPMAN

Author of the "RAILROAD SERIES," Etc.

With a Foreword by Jack Binns, Radio Expert of the *New York Tribune*

Illustrated. Individual colored wrappers for each story

A new series for boys giving full details of radio work, both in sending and receiving—showing how small and large amateur sets can be made and operated, and how some boys got a lot of fun and adventure out of what they did. Each volume from first to last is so thoroughly fascinating, so strictly up-to-date and accurate, we feel sure all lads will peruse them with great delight.

Each volume has a Foreword by Jack Binns, the well-known radio expert of the *New York Tribune*.

THE RADIO BOYS' FIRST WIRELESS ; Or, Winning the Ferberton Prize

THE RADIO BOYS AT OCEAN POINT ; Or, The Message That Saved the Ship

THE RADIO BOYS AT THE SENDING STATION ; Or, Making Good in the Wireless Room

THE RADIO BOYS AT MOUNTAIN PASS; Or, The Midnight Call for Assistance

THE RADIO BOYS TRAILING A VOICE; Or, Solving a Wireless Mystery

THE RADIO BOYS WITH THE FOREST RANGERS ; Or, The Great Fire on Spruce Mountain.

GROSSET & DUNLAP, NEW YORK

BEST BOOKS FOR BOYS

Each Volume Illustrated and Durably Bound. Colored Wrappers

THE RAILROAD SERIES

By ALLEN CHAPMAN

In this line of books there is revealed the whole workings of the great railroad system. There are adventures in abundance—railroad wrecks, dashes through forest fires, the pursuit of a "wildcat" locomotive, the disappearance of a pay car with a large sum of money on board—but there is much more than this—the intense rivalry among railroads and railroad men, the working out of running schedules, the getting through "on time" in spite of all obstacles, and the manipulation of railroad securities by evil men who wish to rule or ruin.

Books that every American boy ought to own.

RALPH OF THE ROUND HOUSE ;
Or, Bound to Become a Railroad Man.

RALPH IN THE SWITCH TOWER ;
Or, Clearing the Track.

RALPH ON THE ENGINE ;
Or, The Young Fireman of the Limited Mail.

RALPH ON THE OVERLAND EXPRESS ;
Or, The Trials and Triumphs of a Young Engineer.

RALPH, THE TRAIN DISPATCHER ;
Or, The Mystery of the Pay Car.

RALPH ON THE ARMY TRAIN ;
Or, The Young Railroader's Most Daring Exploit.

THE TOM SWIFT SERIES

By VICTOR APPLETON

Every youngster is filled with the marvels of invention displayed in motor cars, motor boats, submarine boats and airships. It is the purpose of these spirited tales to convey in a realistic way the wonderful advances in land and sea locomotion.

TOM SWIFT AND HIS MOTOR CYCLE
TOM SWIFT AND HIS MOTOR BOAT
TOM SWIFT AND HIS AIRSHIP
TOM SWIFT AND HIS SUBMARINE BOAT
TOM SWIFT AND HIS ELECTRIC RUNABOUT
TOM SWIFT AND HIS WIRELESS MESSAGE
TOM SWIFT AMONG THE DIAMOND MAKERS
TOM SWIFT IN THE CAVES OF ICE
TOM SWIFT AND HIS SKY RACER
TOM SWIFT AND HIS ELECTRIC RIFLE
TOM SWIFT IN THE CITY OF GOLD
TOM SWIFT AND HIS AIR GLIDER
TOM SWIFT IN CAPTIVITY
TOM SWIFT AND HIS WIZARD CAMERA
TOM SWIFT AND HIS GREAT SEARCHLIGHT
TOM SWIFT AND HIS GIANT CANNON
TOM SWIFT AND HIS PHOTO TELEPHONE
TOM SWIFT AND HIS AERIAL WARSHIP
TOM SWIFT AND HIS BIG TUNNEL
TOM SWIFT IN THE LAND OF WONDERS
TOM SWIFT AND HIS WAR TANK
TOM SWIFT AND HIS AIR SCOUT
TOM SWIFT AND HIS UNDERSEA SEARCH
TOM SWIFT AMONG THE FIRE FIGHTERS
TOM SWIFT AND HIS ELECTRIC LOCOMOTIVE

GROSSET & DUNLAP, PUBLISHERS, NEW YORK

The RADIO BOYS AT OCEAN POINT

By ALLEN CHAPMAN

WITH FOREWORD BY JACK BINNS

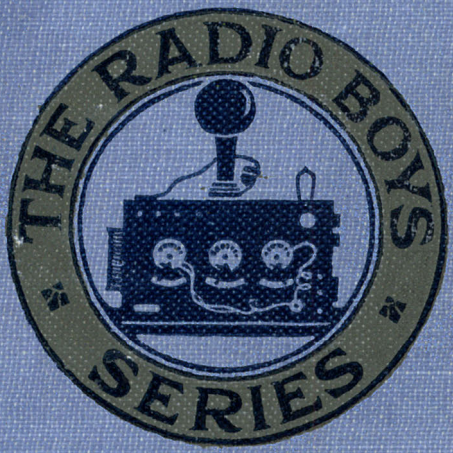
GROSSET & DUNLAP

THE RADIO BOYS AT OCEAN POINT

ALLEN CHAPMAN

Grosset & Dunlap

THE RADIO BOYS AT OCEAN POINT



ALLEN CHAPMAN

Christmas Greetings

from

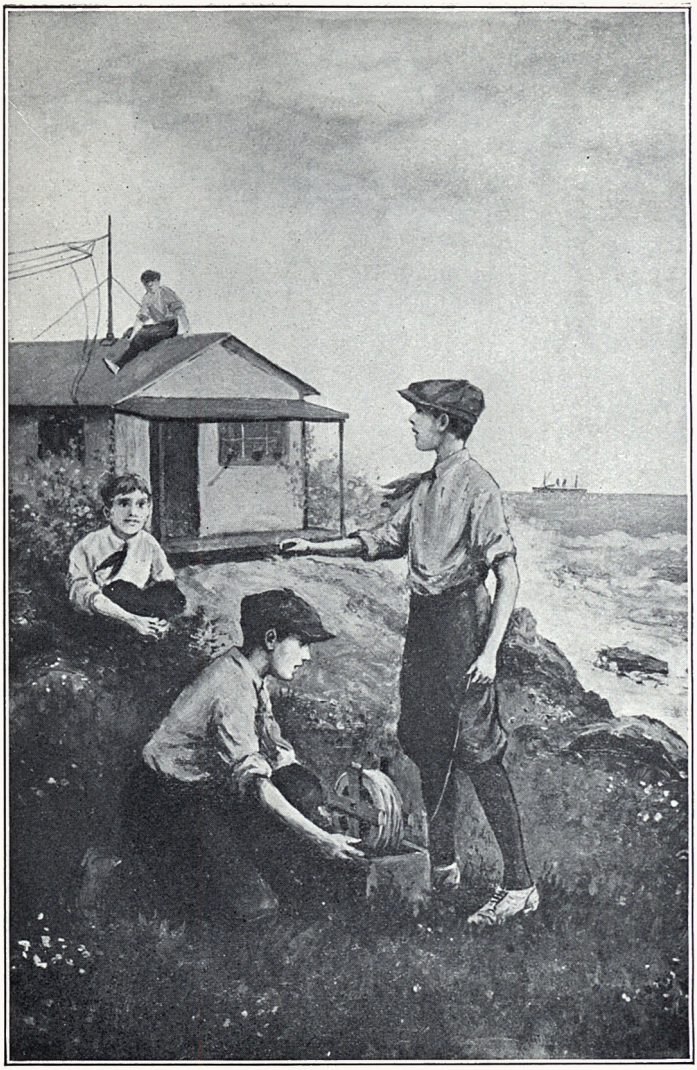
Mother

to

John J Krula Jr

Dec. 1923

THE RADIO BOYS AT OCEAN POINT



GETTING UP THE AERIAL WAS A BLISTERING HOT JOB.

The Radio Boys at Ocean Point. *Page* 93

THE RADIO BOYS SERIES
(Trademark Registered)

THE RADIO BOYS AT OCEAN POINT

OR

THE MESSAGE THAT SAVED THE SHIP

BY

ALLEN CHAPMAN
AUTHOR OF
THE RADIO BOYS' FIRST WIRELESS
THE RADIO BOYS AT MOUNTAIN PASS
RALPH OF THE ROUNDHOUSE
RALPH THE TRAIN DESPATCHER, ETC.

WITH FOREWORD BY
JACK BINNS

ILLUSTRATED

NEW YORK
GROSSET & DUNLAP
PUBLISHERS

Made in the United States of America

BOOKS FOR BOYS

By Allen Chapman

12mo. Cloth. Illustrated.

THE RADIO BOYS SERIES

(Trademark Registered)

THE RADIO BOYS' FIRST WIRELESS
Or Winning the Ferberton Prize
THE RADIO BOYS AT OCEAN POINT
Or The Message that Saved the Ship
THE RADIO BOYS AT THE SENDING STATION
Or Making Good in the Wireless Room
THE RADIO BOYS AT MOUNTAIN PASS
Or The Midnight Call for Assistance
THE RADIO BOYS TRAILING A VOICE
Or Solving a Wireless Mystery

THE RAILROAD SERIES

RALPH OF THE ROUNDHOUSE
Or Bound to Become a Railroad Man
RALPH IN THE SWITCH TOWER
Or Clearing the Track
RALPH ON THE ENGINE
Or The Young Fireman of the Limited Mail
RALPH ON THE OVERLAND EXPRESS
Or The Trials and Triumphs of a Young Engineer
RALPH THE TRAIN DESPATCHER
Or The Mystery of the Pay Car
RALPH ON THE ARMY TRAIN
Or The Young Railroader's Most Daring Exploit

GROSSET & DUNLAP, Publishers, New York

COPYRIGHT, 1922, BY
GROSSET & DUNLAP

The Radio Boys at Ocean Point

PUBLISHED JUNE, 1922

FOREWORD

By Jack Binns

In these days of Radio broadcasting, when the country has gone wild over wireless music and entertainment, there is a tendency to overlook the other phases of radio—such as its use as a means of saving life at sea, and for navigational purposes generally. There is no doubt about the interesting character of broadcasting, and equally, there is no doubt about the importance of radio as a means of life saving.

With this thought in mind, I think that the present volume, detailing the adventures of the Radio Boys, serves a very useful purpose in that it forcibly portrays the use of wireless to bring aid to a disabled ship on the high seas in a storm.

By doing this it will inculcate a desire among

boys to learn the wireless code and transmit wireless telegraphy messages themselves, and in doing so will tend to develop that nucleus of communication experts in the coming generation, which is always an imperative necessity to every nation.

CONTENTS

CHAPTER		PAGE
I.	Taken Unawares	9
II.	Just in Time	20
III.	Marvels of Radio	30
IV.	Facing the Bully	37
V.	A Big Advance	44
VI.	The Wonderful Tube	52
VII.	Baseball by Wireless	59
VIII.	A Thrilling Climax	68
IX.	The Loop	74
X.	Off for the Sea Shore	81
XI.	A Long Swim	91
XII.	The Radio Station	100
XIII.	Exciting Sport	109
XIV.	Fun in the Surf	117
XV.	Skimming the Waves	124
XVI.	A Thankless Rescue	130
XVII.	An Ocean Buckboard	140
XVIII.	In the Wireless Room	147
XIX.	Dancing to Radio	155
XX.	The Radio Concert	165

CONTENTS

CHAPTER		PAGE
XXI.	A Dastardly Attack	173
XXII.	In the Grip of the Storm	182
XXIII.	From the Jaws of Death	194
XXIV.	A Terrible Plight	204
XXV.	The Fight in the Dark	211

THE RADIO BOYS AT OCEAN POINT

CHAPTER I

TAKEN UNAWARES

"JIMINY, but this is hot work!" exclaimed Bob Layton, as he laid down the hammer he was using and wiped his perspiring forehead.

"Hot is right," agreed his friend, Joe Atwood, as he also took a moment's breathing space. "You might almost think it was August instead of early June. Old Sol must have got mixed up in his calendar."

"I'd call it a day and knock off right now if we were doing anything else," remarked Bob. "But, somehow, when I get going on this radio business I can't seem to quit. There's something about this wireless that grips a fellow. Work seems like play."

"Same here," said Joe. "I guess we're thirty-third degree radio fans all right. I find myself talking radio, thinking radio, dreaming radio. If there was any such thing as radio breakfast food I'd be eating it."

"I'm afraid we'll get thin if we wait for that," laughed Bob, picking up his hammer and resuming work on the aerial that they were stringing on the top of his father's barn. "But come along now, old scout, and get a hustle on. We're going to finish this job to-day if it takes a leg."

Joe stretched himself lazily.

"I hope it won't come to that," he replied. "I need both legs in my business."

"Well, come along and shake a leg anyway," counseled Bob. "I'm not asking you to lose one."

"I'm glad we decided to make this aerial in umbrella shape," remarked Joe, as, following his friend's example, he set busily to work. "I think it has it all over the vertical one. We'll be able to hear the messages from the broadcasting station a heap better than we ever did before."

"I'm sure we shall," returned Bob. "That's the kind Doctor Dale is using on his set, and he tried both the vertical and the flat-top kind before he finally settled on this. It's better for long-wave work. It stands to reason that since it has the greatest surface area it also has the greatest capacity. Then, too, the end of the antenna that has the greatest potential is nearest the ground. The doctor gave me a lot of dope about it that sounded reasonable. He knows by actual experience, and that's better than all the theory in the world."

"What Doctor Dale says goes with me all right," replied Joe. "He's never been wrong yet in any of the tips he's given us. It's funny, isn't it," he continued, as he deftly drove a nail, "that we're never satisfied with what we've got in this radio work? That first set we put together looked pretty good to us at the time. Then the ones with which we won the Ferberton prizes looked a good deal better yet. But now here we are making it still better."

"That's the beauty of radio," said Bob, with enthusiasm. "The surface of it hasn't been more than scratched so far. It's practically a brand new thing with a million features to be explored and countless improvements to be made. I suppose a few years from now we'll be laughing at the instruments we're using now. They'll seem as old fashioned as the stage coach and the kerosene lamp. Some of the best brains in the world are working at it now, and there's hardly a day that you don't hear of something new in connection with it. It keeps you guessing all the time as to what will turn up next."

"Right you are," agreed Joe. "Did you read the other day about that man in Paris who runs his house by radio? You know they have a powerful radio outfit on the Eiffel Tower. That starts operations at six o'clock every morning. This fellow has rigged up things all over his house

that are controlled by the waves that come from the tower. First the shutters fly open, then the curtains are drawn back, then electric heaters get into action and begin to make the coffee——"

"Say," interrupted Bob, turning to look at his friend, "what are you giving me? Trying to get me on a string?"

"Honest to goodness, I'm not trying to kid you," replied Joe. "This is straight goods. The coffee begins to bubble in the percolator, the breakfast is started cooking, and the people are waked up by electric bells placed alongside their beds. If the weather is hot, the electric fans are started working."

"Does it wash and dress the baby, too?" demanded Bob, with a laugh.

"I don't know whether they've got as far as that yet," replied Joe, with a grin; "but it starts a lullaby at night and sings the baby to sleep. It sure does wonders. There seems to be no limit to what it can be made to do."

"We'll have to tell Jimmy about that," chuckled Bob. "Anything that will save work will make a hit with him. He'll want to hitch it up so that it will saw wood for him and mow the front lawn. By the way, Joe, when did Jimmy say he'd be around? He promised to help us out with this."

"He said he wouldn't be able to get here before three," replied Joe. "He had to go on an

errand for his father. But to-day's baking day at his house, and I smelled doughnuts cooking as I came past. Ten to one he's filling up on those. That beats working on a roof in a hot sun."

"I shouldn't wonder if you were more than half right," agreed Bob. "But what's keeping Herb? He promised to help out on the job."

"There's company at his house," explained Joe. "But he said he'd slip away as soon as he could and get over here."

"Sounds mighty uncertain," said Bob. "Looks like a case of doing it ourselves if we want it done. And it's got to be done this afternoon. They've got a dandy program on at the broadcasting station to-night, and I don't want to miss it."

The two boys set to work with redoubled energy, despite the sweat that rolled down their faces and made them have frequent recourse to their handkerchiefs.

"What's the idea of all those rocks down at the side of the barn, Bob?" inquired Joe, at the moment that his work brought him close to the edge of the roof.

"They're for some repairing that dad's going to do to the barn," replied Bob. "The side of it has settled some, and he's going to put in a new stone foundation. The old shebang needs a lot of fixing, anyway. The water pipes are rusty, and they'll have to be replaced. He wants to get

the place in shape before we go down to Ocean Point for the summer."

"Ocean Point!" repeated Joe, with a sigh. "Why do you want to bring that up now when I'm dripping with sweat? It's cruelty to animals. Say, Bob, what would you give just at this minute to be taking a dip in the briny? Just imagine yourself at the end of the pier with your hands above your head, ready to dive down into that cool green water, down, down, down, and feel it closing all around you and——"

"Who's cruel now?" groaned Bob. "Stop right where you are or I'll throw something at you. Don't you suppose I'm just as crazy as you to get down there? It's only last night that I dreamed I was there. Oh, boy! The swimming, the fishing, the boating, the games on the sand, the——"

"Radio," suggested Joe.

"Righto!" agreed Bob. "That will be a new thing there that we've never had before. And instead of being in a hot, stuffy room, we can sit on the veranda, with the sea breeze blowing all around us, and the ocean stretched before us in the moonlight, and the lights of ships passing up and down the coast and——"

"Back up," laughed Joe. "You're getting poetical. You could almost set that to music. But you're dead right that it will be just what the

doctor ordered to listen to a radio concert under such conditions. Where can we put up our radio set? In your cottage or mine, I suppose."

"I've got an idea it would be a good thing to put it up in the community hall," replied Bob. "Then everybody could enjoy it, and there's a broader and bigger piazza there than any of the cottages have. We're all like one big family there anyway."

"That's a dandy plan," agreed Joe. "I shouldn't wonder, too, if we caught a good many messages from ships while we are down there. Almost all the vessels now are equipped with wireless, and we ought to be able to listen in on lots of talk going on with the shore."

"I only wish we could talk back to them," said Bob. "I'm keen for the time when we can send messages, as well as listen in on them. But that will be possible, too, before the end of the summer. I'm studying up hard on the code and I know you are too, and we ought to be able to pass our examinations soon and get the right to have a sending station. But look who's going down the street, Joe!" he exclaimed, interrupting himself suddenly.

Joe followed the direction of his glance and gave a grunt of disgust.

"Buck Looker and his bunch," he remarked contemptuously. "Carl Lutz and Terry Mooney

always trailing along with him! I wonder what low-down thing they're cooking up now."

"No knowing," replied Bob carelessly. "They've steered pretty clear of us since we got back that set of Jimmy's that they took. I have to laugh whenever I think of them rolling over and over in the dark and fighting each other when they thought they were fighting us."

Joe laughed too at the recollection.

"We put one over on them then all right," he agreed. "And I have to laugh, too, when I think how he crawled yesterday when you called him down in the school yard while he was bullying little Sam Ashton."

"I didn't want to soil my hands with him," returned Bob. "I'd made up my mind never to speak to him again. But it made my blood boil when I saw the way he was tormenting a boy half his size and I had to interfere."

"It did me good to see how he backed down," chuckled Joe. "I really hoped he wouldn't, for I wanted to see him get a good trimming. But Buck's memory is good, and I guess he remembered the thrashing you handed him the night he was trying to wreck your aerial."

"Perhaps," laughed Bob. "I sure was sore at him that night and I guess I gave him good and plenty."

"The pity of it was," said Joe, "that nobody

was around to see you do it. Ten to one he told his cronies afterward that it was he who licked you. But there was no mistake yesterday. Lutz and Mooney were standing close by and saw him take water. He turned fairly green with fright when he saw you double up your fists. You want to keep your eyes open, Bob, for he'll try to get even by doing you a dirty trick whenever he thinks he can get away with it safely."

"Let him try," replied Bob indifferently. "That's the least of my worries. What's bothering me a good deal more now is why Jimmy and Herb haven't turned up to help us out on this job."

"Guess they've got stalled somewhere," hazarded Joe. "But even if they don't turn up we'll be done in half an hour or so. Then it's me for a cold bath and some dry clothes! I'm drenched to the skin."

A half hour later there was no sign of the truants, but the job was done, and Bob and Joe ran their eyes over it with keen satisfaction.

"Some little mechanics, old scout!" chuckled Bob, slapping his friend on the shoulder. "Now for that cold bath you were——"

He stopped suddenly and gave vent to an exclamation of surprise.

"What's the matter?" queried Joe, who was adjusting his belt.

"The ladder!" exclaimed Bob. "It's gone!"

Joe looked toward the edge of the roof, and saw that the top of the ladder by which they had mounted was no longer in sight.

"It must have fallen down," he said; "but it's queer we didn't hear it."

"Fallen nothing!" snorted Bob, as he crawled to the edge of the roof and looked over. "It was resting solidly against the roof when we left it, for I shook it with my hand to make sure. Somebody has taken it down. There it is lying on the ground, twenty feet away from the barn."

"Now we're in a nice fix!" exclaimed Joe, in dismay. "Have we got to stay here all the afternoon and be baked to a frizzle by this scorching sun? Call to somebody in the house, Bob."

"That's the worst of it," replied Bob lugubriously. "Mother's out calling to-day and there isn't a soul at home."

The boys looked at each other, and the same thought came into the minds of both.

"Buck Looker!" they exclaimed in one voice.

"That's who it was," declared Bob savagely. "He and his gang have done this. If we could see him, it follows that he could see us, and he thought he'd keep us up here broiling while he had the laugh on us. No doubt the whole crowd are hiding somewhere and watching us at this minute."

"Well, they're not going to make a show of us," Joe almost shouted in his wrath. "I'm going to get down off this roof and I'm going to get down quick, ladder or no ladder."

Before Bob could stop him he had grasped the water pipe that ran alongside the barn and started to slide down.

"Don't! Don't!" cried Bob, in alarm. "The pipe's rusty! It'll break! For the love of Pete——"

His voice ended almost in a scream.

For at that moment what he feared happened.

The pipe broke beneath Joe's weight. The lad felt it going and grabbed frantically at the upper part that was still fastened to the roof. He caught it and held on, his legs dangling in the air directly over the pile of rocks more than twenty feet below. To fall on those rocks meant broken limbs or death!

CHAPTER II

JUST IN TIME

At just the place in the pipe that Joe had grabbed there was a band running around it, perhaps a quarter of an inch thick. It was smooth and slippery, but yet gave more support to his clutching hands than would have been afforded by the pipe itself. To this precarious support poor Joe clung with desperation that was rapidly becoming despair as he felt his arms tiring and his hands slipping. A glance below had told him what awaited him if he fell on that pile of rocks.

Simultaneously with the breaking of the pipe Bob had flung himself at full length on the roof, with his arm extended over the edge. His feet felt around frantically and found a cleat in the roof in which he gripped his toes. Reaching as far as he could over the edge with one hand and holding on with the other, he found that he could just reach Joe's hands with his own.

If the roof had been flat, he might have been

able by sheer strength to pull his friend up. But it was sloping, and, as he lay, his feet were considerably higher than his head. So he had no purchase, no way to brace himself and pull upward. As it was, he had to dig his toes tightly against the cleat just to sustain the weight of his own body.

There was imminent danger that if he even grasped Joe's hand the added weight would pull him over the edge of the roof. But this did not deter him for a second. He reached down and caught Joe around one of his wrists.

"I can't pull you up, Joe," he panted; "but I can hold on to you until help comes."

He lifted up his voice to shout for help, when just at that instant Herb Fennington and Jimmy Plummer turned the corner of the barn. They were talking and laughing gaily together, but stopped short with a cry of alarm as they saw the terrible plight of their friends.

"Quick! Quick!" cried Bob. "Get the ladder and put it up. Quick!"

There was no need of his frantic adjuration, for Jimmy and Herb understood instantly the tragedy that impended. They ran for the ladder, and with some difficulty, for it was long and heavy, put it up alongside the barn and close to Joe's swaying figure.

Then Herb, who was the stronger of the two,

ran up the rungs until he was directly opposite his comrade.

"I'll hold on to one arm, Joe," cried Bob. "Let go the pipe with the other and give it to Herb."

Joe did as directed and the two boys swung him over to the ladder. He felt for the rung with his feet, and when they were firmly planted on it, Herb placed one of his hands on another rung and Bob followed suit. Then while Jimmy held the ladder at the foot to keep it from slipping, Joe and Herb made their way slowly to the ground and Bob came after.

They seated Joe on a box that stood near by, and his comrades crowded around him; joyful beyond words at his narrow escape, clasping his hands and slapping him on the back.

Joe was gasping under the muscular and nervous strain that he had undergone in the few minutes that had seemed to him like ages, but he rallied gamely and tried to joke.

"I said I was going to get down off that roof quick," he said. "But I came mighty near coming down quicker than I wanted to. I can't thank you fellows enough."

And while they stand around him jubilating over his rescue, it may be well, for the benefit of those who have not read the preceding volume of this series, to tell who the Radio Boys were and

what had been their adventures up to the time this story opens.

Bob Layton was a stalwart, vigorous youth of fifteen years, who lived in the thriving town of Clintonia, a city of about ten thousand population and located some seventy-five miles from New York City. His father was a prosperous druggist and chemist, esteemed and respected, and a leader in the civic life of the town. Bob was tall for his years, of dark complexion, with merry, flashing eyes. He was a leader in baseball, football, and the other athletic sports in which boys of his age delight. He was frank, truthful, courageous and a general favorite.

His special chum was Joe Atwood, son of a prominent doctor of Clintonia. Joe differed from Bob in being fair-skinned instead of dark. But the qualities of character of both boys were such as to make them close friends, and where one was to be found the other was seldom very far away. Joe, however, was impulsive, and his temper was of the "hair trigger" variety that required frequent curbing from his cooler-headed chum.

Of the many friends they had in town, the chief perhaps were Herbert Fennington and Jimmy Plummer. Herbert, or Herb, as he was usually called, was the son of a merchant, and was an easy-going, good-natured boy who was not especially fond of work, but who had an unusual lik-

ing for jokes and conundrums. He was slightly younger than Bob and Joe, but not enough to make much difference. Jimmy Plummer, the youngest of the four, was the son of a carpenter. He was jolly, fat, and round, with an appetite that made him the subject of good-natured jesting on the part of the other boys. He had been nicknamed "Doughnuts" because of his special fondness for that toothsome delicacy, and he did his best to live up to the name.

The boys were always much together, but of late their association had become still closer because of their common interest in the wonders of the wireless telephone. The marvelous features of this great invention had caught fast hold of their youthful imaginations, and they were soon so much absorbed in it that almost everything else was forgotten, or at least had to take second place.

Two things happened at almost the same time that increased their enthusiasm in this subject. One was a talk given to them on radio discoveries by Dr. Amory Dale, the pastor of the Old First Church of Clintonia, who had a scientific turn of mind and was most keenly interested in radio. The inspiration he gave them by his talk, together with practical object lessons on the making of radio sets, had an importance that could hardly be overestimated.

Shortly after this the member of Congress from the district in which Clintonia was included, Mr. Ferberton, offered prizes open for competition to all the boys of the district for the best radio sets made by the boys themselves. As the first prize was for a hundred dollars and the second for fifty, they were well worth trying for, and Bob, Joe, and Jimmy set to work in earnest to win one of them. Herb, owing to his natural indolence, did not enter into the competition, a circumstance that he afterward regretted.

They had a good many troubles and misadventures about this time, owing chiefly to the malice of Buck Looker, a bully of the town, who, together with his cronies, Carl Lutz and Terry Mooney, almost as bad as himself, did all they could to hinder the radio boys in their plans. Jimmy's set was stolen by them on one occasion and on another Bob detected Buck trying to destroy his aerial at night, and gave the bully the trouncing that he richly deserved.

A curious accident that happened in the town opened to the boys a mystery that seemed difficult of solution and set their feet on the path of exciting adventures. How they rescued a girl whose automobile had run wild and dashed through the windows of a store, what they learned of her story and how they got on the track of a rascal who had swindled her, and what part the

radio played in the unraveling of the plot, are narrated in the first book of this series, entitled: "The Radio Boys' First Wireless; Or, Winning the Ferberton Prize."

It did not take Joe long to recover from the shock he had had when he found himself suspended in midair over the rocks that had been gathered for the repairing of the foundation of the barn. Bob's danger also had been great, and all felt that they had reason for being profoundly grateful over the happy outcome of the adventure.

"You just came in time, fellows," said Bob. "Joe is no featherweight, and my arm was getting numb. A minute or two more and we'd both have had a tumble that I hate to think about."

"That shows what good judgment we had in picking just the right time to come," replied Jimmy, winking slily at Herb. "It takes some brains to be Johnny-on-the-spot just when you're needed. Not a minute too late, not a minute too soon—that's my motto."

"I'll admit that you took good care not to get here too soon," replied Bob, with a laugh. "Where have you been all the afternoon? Why did you leave Joe and me to hold the bag?"

"Look at his pockets and you'll find the answer," said Joe, pointing to suspicious bulges in Jimmy's jacket pockets.

"That's all the credit a fellow gets when he tries to be generous," complained Jimmy, in an aggrieved tone, as he emptied the pockets in question of half a dozen doughnuts. "Here I wait until the doughnuts are made so that I can bring along a lot for you fellows, and what do I get? Nothing but abuse. I was just crazy to help you fellows put up that aerial, but I sacrificed my own feelings and waited for the doughnuts so that you could have some."

"Those doughnuts were cooking three hours ago," retorted Joe.

"How do you know?" asked Jimmy.

"Because I smelled them as I came past your house," replied Joe.

"Oh, that was the first batch," explained Jimmy. "Most of those have gone by now."

"What became of them?" grinned Bob.

"How do I know?" countered Jimmy. "My father and mother have pretty good appetites. Then of course I sampled one or two. Mother would have thought I didn't like her cooking if I hadn't. And if there's anything I won't do it's to hurt my mother's feelings. We never have more than one mother, you know," he added virtuously.

"Sampled one or two!" sniffed Joe. "One or two dozen you mean."

"How did you fellows come to get in such a fix?" queried Herb. "Did the ladder fall down?"

"It did not," returned Bob with emphasis. "It was taken down while we weren't looking by somebody who wanted to play a trick on us. And I can come pretty near to guessing who did it, too," he added.

"Why not come right out with it?" said Joe, his face flushing with indignation. "It was Buck Looker and his gang who did it. I'm just as sure of it as though I had seen them. It's no thanks to them that I'm not dead or a cripple this minute."

"That explains something that Jimmy and I noticed just before we came up," said Herb eagerly. "We saw Buck and Lutz hot-footing it down one street and Terry Mooney down another. I thought they were having a race around the block or something like that."

"That just proves what I said," declared Joe. "They were waiting around to gloat over the hole they thought they had put us in. Then when they saw that one or both of us were going to be smashed on the rocks and perhaps killed, they got scared and lit out so as to be as far away as possible when the thing happened. Then they couldn't be suspected of being mixed up in it. It's all as clear as daylight, and it adds another tally to the score we have against those fellows."

"Oh, well, a yellow dog is a yellow dog, and he acts according to his nature," said Bob. "But

now since you fellows are here, come up the ladder and take a look at the aerial and see what kind of job we've made of it."

Herb and Jimmy followed him up the ladder and were loud in their praises of the new contrivance.

"Couldn't have done it better myself," said Jimmy patronizingly. "I didn't worry about my not being here, for I had the fullest confidence in you and Joe. I knew you'd get it up all right."

He avoided the pass that Bob made at him, and after the boys had gathered up the tools and left everything shipshape, they came down the ladder and rejoined their comrade.

"I guess it's home for us now," said Herb.

"And mighty glad I am that none of us has to be carried home," put in Bob.

"You bet," remarked Joe, as he rose to go. "Do you remember what you said, Bob, about finishing that job if it took a leg? Well, it came pretty near to taking one—or two—or perhaps even worse than that."

CHAPTER III

MARVELS OF RADIO

"DON'T forget now," Bob reminded them, as his friends passed out of the gate on the way to their respective homes. "Be over at the house a little before eight, for the concert begins at eight o'clock sharp, and there aren't many things in it that we want to miss. It's the best program that I've seen for a month past. There's violin music and band marches and opera selections and a bit of jazz mixed in."

"Sounds as if it were going to be the cat's whiskers," said Jimmy.

"Jimmy, I'm ashamed of you," said Bob, with mock severity. "When are you going to leave off using that horrible slang?"

"He might at least have said the 'feline's hirsute adornments,'" muttered Joe. "That would have been a little more dignified. But dignity and Jimmy parted company a long time ago."

"I didn't know they'd ever met," remarked Herb. "But if they were 'lovers once they're strangers now.'"

"I shook it when I found that it wasn't good to eat," said the graceless Jimmy, nowise abashed. "But you fellows had better stop picking on me or it'll be good-bye to any more doughnuts."

They laughed and parted with another admonition by Bob to be on time. He himself went into the house and solaced himself with the cold bath and change of clothes that he had been promising himself all through that hot afternoon. A brisk rubdown with a rough towel did wonders, and by the time his mother returned he was feeling in as good shape as ever, with the exception of a touch of lameness in the right arm that had been subjected to such an unusual strain that day.

There were grave looks on the faces of both his parents as, at the supper table, he narrated the events of the afternoon. Mingled with their gratitude at his and Joe's escape from injury, was a feeling of deep indignation against the probable authors of the trick.

"That Buck Looker is one of the worst if not the very worst boy in town!" ejaculated Mr. Layton. "There's hardly a week goes by without hearing something mean or rowdyish with which he's mixed up. He's the kind of boy that criminals are made of after they grow up."

"One might have overlooked the taking down of the ladder in itself," commented Mrs. Layton; "but the contemptible part was in running away

instead of running to help when he saw that the boys were in danger of being crippled or killed. He and his cronies could have got the ladder up in time, for they knew of the danger before Herb and Jimmy did. But he'd have let the boys be killed rather than take a chance of himself being blamed. That shows the stuff the boy is made of."

"Pretty poor stuff, I'm afraid," agreed Bob. "But, after all, Mother, here I am safe and sound, and all's well that ends well."

By a quarter to eight that evening the boys began to come, and even the tardy Jimmy was on hand before the time scheduled for the concert to begin. In addition to the pleasure they anticipated from the unusually fine program, they were keenly curious to learn what improvement, if any, had been made by the installation of the umbrella aerial.

They were not long left in doubt. From the very first tuning in there was an increase in the clearness and volume of the sound that surpassed all their expectations. The opening number chanced to be a violin solo, played by a master of the instrument. It represented a dance of the fairies and called for such rapid transitions up and down the scale as to form a veritable cascade of rippling notes, following each other with almost inconceivable swiftness. And yet so clearly

was each note reproduced, so distinctly was each delicate shading of the melody indicated, that the player might have been in the next room or even in the same room behind a screen.

The boys and the others were delighted. They listened spellbound, and when in a glorious burst of what might have been angel music the selection ended, the lads clapped their hands in enthusiastic applause.

"That's what you can call music!" ejaculated Bob.

"That player knows what he's about," was Herb's tribute.

"And how perfectly we heard every note," cried Joe. "We certainly made a ten strike, Bob, when we rigged up that new aerial. It's got the other beaten twenty ways."

"I guess you're right about that," said Jimmy. "I don't grudge a minute of the time you spent this afternoon in putting it up. It was worth all the trouble."

Bob looked hard at him, but Jimmy was as sober as a judge, and before either Bob or Joe could frame a suitable retort the crashing notes of a military band came to their ears and put from them the thought of anything else. It was a medley that the band played, composed of well known airs ranging from "Hail Columbia" to "Dixie" and so inspiring was it that the boys' hands were

moving and their feet jigging in time with the music all through the performance.

For fully two hours they sat entranced through a varied program that included things so dissimilar as famous grand opera selections, the plaintive melodies of Hawaiian guitars, and some jazz, and when at last the list was ended the boys sat back with a sigh of satisfaction, their faces flushed and their eyes shining.

"Ever hear anything like it?" asked Bob, as he relaxed into his chair and took off his ear pieces.

"It's the best ever!" declared Joe. "And to think that we can have something like it almost any night we choose, and all of that without going out of this room!"

"That's the beauty of it," Bob assented. "To hear a concert that included such fine talent as that we'd have to go to New York. That would mean all the time and trouble of dressing up, the long ride on the railroad train, the getting back home at two or three o'clock in the morning, to say nothing of the ten dollars apiece or thereabouts that we'd have to pay for train fare and tickets for the concert. For us four that would mean about forty dollars. Now we haven't paid forty cents, not even one cent, we haven't had to dress, we've sat around here lazy and comfy, we can go to bed whenever we like, and we've had the concert just the same. And what we did

to-night we can do any night. I tell you, fellows, we haven't begun yet to realize what a wonderful thing this radio is. It's simply a miracle."

"Right you are," agreed Joe. "And just remember that what's true of us four is true of four thousand or perhaps four hundred thousand. Take the biggest concert hall in the United States and perhaps it will hold five thousand. When it's full, everybody else has to stay away. But there's no staying away with radio. And every one has as good a seat as any one else. Think where that concert's been heard to-night. People out as far as Chicago and Detroit have heard it. They've listened to it on board of ships out at sea. In lonely farmhouses people have enjoyed it. Men sitting around campfires up in the Adirondacks have had receivers at their ears. Sick people and cripples lying on their beds have been cheered by it. Lonely people in hotel rooms far away from home have found pleasure in it. There's absolutely no limit to what the radio can do. It seems to me that it throws in the shade everything else that's ever been invented."

"You haven't put it a bit too strong," chimed in Herb. "But talking about a lot of people hearing it makes me think that perhaps we fellows have been a bit selfish."

"What do you mean?" asked Jimmy in some surprise. "It isn't so long ago that we got

the old folks and sick folks together and gave them a concert at Doctor Dale's house—Joel Banks and Aunty Bixby and the rest of them."

"I don't mean that," explained Herb. "That was all right as far as it went, and I hope we'll do it soon again. But what I have in mind are our own folks and our friends. Our fathers and mothers haven't heard much of this concert tonight, and there are some of the fellows that we might have invited in."

"But we have only four sets of ear pieces," objected Jimmy. "I suppose of course we could attach a few more——"

"I get Herb's idea," interrupted Bob, "and it's a good one. He thinks that we ought to have a loud speaker—a horn that would fill the room with sound and do away with the ear pieces altogether."

"You hit the bull's-eye the first time," Herb conceded. "In other words, instead of having a concert for four have it for fourteen or forty."

CHAPTER IV

FACING THE BULLY

THE radio boys ruminated over Herb's suggestion for a little while.

"The idea itself is all right," pronounced Joe slowly, "but the trouble is that we couldn't do it very well with this set, which is the best we've been able to make so far. We can hear the sound that comes over the wire well with these earpieces glued to our ears, but the sound would be lost if it were spread all over the room."

"Wouldn't the horn help out on that?" asked Herb.

"Not by itself, it wouldn't," answered Bob. "It's a mistake to think that the horn itself makes the sound or increases its loudness. The only use of the horn is to act as a relay for the diaphragm of the receiver and connect it with the air in the room. But the sound itself must first be in the receiver. And with a crystal detector, such as we're using in this set, I'm afraid that we couldn't get volume of sound enough. It

would be spread out over the room so thinly that no one would be able to hear anything. We'll have to amplify the sound, and to do that there's nothing better than a vacuum tube. That's the best thing that the world has discovered so far."

"I guess it is," remarked Jimmy. "Doctor Dale has one in his set."

"Yes," chimed in Joe. "He even has more than one. The more there are the louder and clearer the sound."

"I don't suppose we could make one," Herb remarked.

"No; that's one thing that costs real money," replied Bob. "But don't let that bother you. I've got quite a lot left of that hundred dollars of the Ferberton prize, and there's nothing I'd rather spend it for than to improve the radio set."

"Count me in on that, too," said Joe. "I've scarcely touched my fifty."

"How about the horn?" queried Jimmy. "Will that have to be bought, too?"

"No," replied Bob. "That's something you can make. That is, if you're not too tired from the work you did on setting up the aerial this afternoon."

"But," objected Jimmy, ignoring the gibe, "I don't know anything about working in tin or steel. I haven't any tools for that."

"The horn doesn't have to be made of metal,"

answered Bob. "In fact, it's better if it's not. Some horns are even made of concrete——"

"Use your head for that, Jimmy," broke in Herb irreverently.

"But best of all," Bob continued, while Jimmy favored the interrupter with a glare, "is to make the horn of wood. Take some good hard wood, like mahogany or maple, polish the inside with sandpaper after you've hollowed it out, give it a coat of varnish or shellac, and you'll have a horn that can't be beaten. It's very simple."

"Sure!" said Jimmy sarcastically. "Very simple! Just like that! Simple when you say it quick. Simple as the fellow that tells me how to do it."

"Just imagine you're hollowing out a doughnut," put in Joe, grinning. "You're an expert at that."

"I'll tell the world he is," agreed Herb, with enthusiasm.

"That reminds me," said Bob, "that there's some pie in the pantry and sarsaparilla in the ice-box that mother told me to pass around among you fellows. That is, of course, if you care for it," he added, as he paused in seeming doubt.

"If we care for it!" cried Jimmy, the creases of perplexity in his brow disappearing as if by magic. "Lead me to that pie. I'll fall on its neck like a long-lost brother."

"It'll fall into your neck, you mean," chuckled Herb, and in less than two minutes saw his prophecy verified.

"And now," said Bob, after the last crumb and drop had disappeared, "I don't want to tie the can to you fellows, but I hear dad moving around and locking up, and that's a sign to skiddoo. We'll think over that idea of Herb's and get a tip from Doctor Dale as to the best way to go about it."

There was a chorus of hearty good-nights and the radio boys separated.

Two days later, as Bob and Joe were coming home from school, the latter, looking behind him, gave vent to an exclamation that drew Bob's attention.

"What's up?" he asked, turning his head in the same direction.

"It's Buck Looker and his bunch!" exclaimed Joe, a flush mounting to his brow and his eyes beginning to flame. "He's been careful to keep out of my way so far. Let's wait here until he catches up to us."

"You'll wait a long time then, I guess," replied Bob, "for he's seen us, too, and he's slowing up already. He doesn't seem a bit anxious to overtake us."

"Then we'll have to go back and meet him,"

said Joe grimly. "I'm going to have it out with him right here and now. He needn't think he's going to get away scot free after the trick he played on me."

"What's the use, Joe?" counseled Bob. "You can't prove it on him and he'll only lie out of it. It's bad policy to kick a skunk."

But Joe had already turned and was striding rapidly back toward Buck and his companions, and Bob went along with him.

There was a hurried confabulation between Buck and his cronies as they saw Bob and Joe advancing toward them, and a hasty looking from side to side, as though to seek some means of escape. But there was no street handy to turn into, and as it would have been too rank a confession of cowardice to turn their backs and run, the trio assumed a defiant attitude and waited the approach of the swiftly moving couple.

Joe stopped directly in front of the bully, while Bob ranged alongside, keeping a sharp watch on the movements of Lutz and Mooney.

"Why did you take down that ladder the other afternoon, Buck Looker?" asked Joe, looking his opponent straight in the eye.

Buck's look shifted before Joe's gaze, but he affected ignorance.

"What ladder and what afternoon?" he coun-

tered, sparring for time. "I don't know what you're talking about, and for that matter I guess you don't either."

"I know perfectly well what I'm talking about, and so do you," replied Joe, coming so near to him that Buck gave ground. "You and your gang took away the ladder from the side of Bob's barn, and in trying to get down I nearly broke my neck."

"Pity you didn't," blustered Buck. "If your ladder fell down and you didn't have sense enough to wait for some one to come along and put it up for you, that wasn't any fault of mine. I wasn't anywhere near Layton's barn that whole afternoon."

"We know better," said Joe. "Bob and I saw you going along the street a little while before we missed the ladder, and Herb Fennington and Jimmy Plummer saw you and your crowd running away like mad while I was hanging to the pipe alongside the barn."

"You shut up!" yelled Buck, in a burst of rage.

"Take off your coat, Buck Looker," cried Joe, dropping his books to the ground, "and I'll give you the same kind of a trimming that Bob gave you the night you tried to wreck his aerial."

For answer Buck tightened his grip on the strap that held his books.

"You stand back, Joe Atwood," he cried, with

a quaver in his voice, "or I'll soak you with these books!"

Joe laughed his disdain.

"You coward!" he exclaimed, and was springing forward when a warning exclamation came from Bob.

"Stop, Joe," he commanded. "Here comes Mr. Preston."

A look of vexation came into Joe's eyes and a look of relief into Buck's as they looked and saw the principal of the high school walking rapidly toward them.

CHAPTER V

A BIG ADVANCE

With the coming of the school principal and the certainty that the threatened row was over, for the present at least, all Buck Looker's usual truculence returned.

"It's lucky for you that Preston happened to turn up just now," he snarled. "I was just getting ready to give you the licking of your life."

"I noticed that," said Joe dryly, as he picked up his books. "Only instead of doing it with your fists, you were going to do it with your books, like the coward that you are. You gave yourself away that time, Buck. It isn't necessary for any one to show you up. You can be depended on to do that job yourself."

By this time the principal was only a few yards away, and Buck and his friends walked away rapidly, while Bob and Joe followed more slowly, so that Mr. Preston soon caught up with them.

"Good afternoon, boys," he said, as he came

abreast of them. "You seemed to be a little excited about something."

"Yes, we were having a little argument," admitted Joe.

The principal looked at them sharply and waited as though he expected to hear more. But as nothing further was said, he did not press the matter. If the trouble had taken place in the school or on the school premises, he would have felt it his duty to go to the bottom of the affair. But he had no jurisdiction here, and he was too wise a man to mix in things that did not directly concern him or his work.

"Well, how goes radio?" he asked, changing the subject. "Are you boys just as enthusiastic over it as you were the night you won the Ferberton prizes?"

"More so than ever," replied Bob, and Joe confirmed this with a nod of the head. "It's getting so that almost every minute we have out of school we're either tinkering with our set or listening in. We've just finished putting up a new umbrella aerial, and it's a dandy."

"I use that kind myself," said Mr. Preston. "I get better results with it than I do with anything else."

"Why, are you a radio enthusiast, too?" asked Bob, in some surprise. "I didn't have any idea you were interested in it."

"Oh, yes," affirmed the principal, with a smile. "I'm one of the great and constantly increasing army of radio fans. I understand there are more than a million of them in the United States now, and their ranks are being swelled by thousands with every day that passes. I use it for my own personal pleasure and for that of my family, but I also have an interest in it because of my profession."

"I understand it's becoming quite a feature in education," remarked Joe.

"It certainly is," replied Mr. Preston. "Many colleges and high schools now have radio classes as a regular part of their course. College professors give lectures that go by radio to thousands where formerly they were heard by scores. I've been thinking of a plan that might be of help in the geography classes, for instance. Suppose some great lecturer or traveler who has been in faraway lands should give a travel talk from some broadcasting station. Then while he was describing China, for instance, we might have moving pictures thrown on a screen in the classroom showing Chinese cities and customs and types. Both the eye and the ear would be taught at the same time, and in a most interesting way, it seems to me. What do you think of the idea?"

"Fine," said Bob.

"Dandy," agreed Joe. "There wouldn't be any

lack of interest in those classes. The boys would be eager to have the time for them come."

"Well," smiled Mr. Preston, "it's only an idea as yet, but it's perfectly feasible and I shouldn't be surprised to see it in general use in a year or two."

He turned into a side street just then with a pleasant good-bye, and the boys went on their way together, picking up Jimmy, who was just emerging from a store.

"What was Mr. Preston talking to you about?" asked Jimmy, with some curiosity, for he had witnessed the parting. "Hauling you over the coals, was he, for something you've done or haven't done?"

"Nothing like that," replied Joe. "We just found out that he is a radio fan like the rest of us."

"Funny, isn't it, how that thing is spreading?" murmured Jimmy musingly. "You couldn't throw a stone now without hitting somebody who is interested in radio."

"All the same, I wish he hadn't caught up to us when he did," grumbled Joe. "I was just going to mix it with Buck Looker when he came along."

"Buck has lots of luck," commented Jimmy. "Tell me all about it."

They told him all the details of the meeting, and became so engrossed in it that they almost ran

into Dr. Dale, who was just coming up from the railroad station.

He greeted them with great cordiality, which met with quite as hearty a response on their part, for the minister was a prime favorite with them and they always felt at their ease with him. There was nothing prim or professional about him, and his influence among the young people was unbounded.

He chatted with them for a few minutes until they reached Bob's gate.

"Won't you come up on the porch for a few minutes, Doctor?" asked Bob. "There are some things we'd like to ask you about radio."

"Certainly I will," replied the doctor, with a smile. "There's not much that I'd rather talk about. In fact, I was just about to tell you of an interesting experience that I had this very afternoon."

He went with the boys up the steps and dropped into the chair that Bob drew up for him.

"Tell us about that first, Doctor," urged Bob. "Our questions can come afterward."

"I just had the luck to get on a train coming home that had a car attached to it where they were trying out a new radio system," replied the minister. "I heard about it from the conductor, whom I know very well, and he arranged it so that I could go into the car where they were

making the experiments. They had a radio set in there with a horn, and the set was connected with an aerial on the roof of the car. They sent out signals to various stations while the train was going along at the rate of forty miles an hour, and got replies that we could hear as plainly as though one of the people in the car were talking to the others. The whole thing was a complete success, and one of the officials of the road who happened to be in the party told me that the express trains on the road were going to be equipped with it.

"Of course, if one road does that, it will not be any time before all the others will, too. It'll not be long before we can be sitting in a car traveling, let us say from New York to Albany, and chat with a friend who may be on another train traveling between Chicago and Denver. Or if a business man has started from New York to Chicago and happens to remember something important in his office he can call up his manager and give him directions just the same as though he pressed a buzzer and called him in from the next room."

"It sounds like magic," remarked Bob, drawing a long breath.

"If we'd even talked about such things a few hundred years ago we'd have been burned at the stake as wizards," laughed the doctor.

"The most important thing about this railroad development," he went on, "is not the convenience it may be in social and business life, but in the prevention of accidents. As it is now, after a train leaves a station it can't get any orders or information until it gets to the next station. A train may be coming toward it head on, or another train ahead of it and going in the same direction may be stalled. Often in the first case orders have come to the station agent to hold a train until another one has passed. But the station agent gets the message just a minute too late, and the train has already left the station and is rushing on to its fate. Then all the agent can do is to shudder and wait for news of the crash. With the radio equipment he can call up the train, tell of the danger, and direct it to come back.

"Or take the second case where a train is stopped by some accident and knows that another train is coming behind it on the same track and is due in a few minutes. All they can do now is to send back a man with a red flag to stop the second train. But it may be foggy or dark, and the engineer of the second train doesn't see the flags and comes plunging on into the first train. With the radio, the instant a train is halted for any reason, it can send a message to the second train telling just where it is and warning of the danger. Hundreds have been killed and millions

of dollars in property have been lost in the past just because of the old conditions. With the radio installed on trains, that sort of thing will be made almost impossible in the future.

"But there," he said, with a smile, "I came up here to answer your questions, and I've been doing all the talking. Now just what is it you wanted to ask me about radio?"

CHAPTER VI

THE WONDERFUL TUBE

"It's about getting a vacuum tube," replied Bob, in answer to the doctor's question. "The crystal detector is all right when we use the ear pieces. But we got to thinking about a horn so that lots of people could enjoy the concerts at the same time, and we figured that the crystal wouldn't be quite good enough for that."

The doctor smiled genially.

"I knew you'd be wanting that sooner or later," he said. "It's the second natural step in radio development. While you were still getting familiar with the working of the wireless, the crystal would do very well. But there comes a time to all amateurs when they get to hankering after something that is undeniably better. And the vacuum tube is that thing."

"It seems funny to me that the vacuum tube could have any use in radio," put in Jimmy. "I never thought of it in any way but as being used for an electric light."

"Neither did lots of other people," replied the doctor, smiling. "Even Mr. Edison himself didn't realize what its possibilities were. He did, though, discover some very curious things about it. In fact, he made the first step that led to its use for radio. He put a plate in one of his lamps. The plate didn't touch the filament, but formed part of a circuit of its own with a current indicator attached. Then when he turned on the light and the filament began to glow, the needle of the indicator began to twitch. Since the filament and the plate weren't touching, the movement of the needle indicated that the electricity must have jumped the gap between the two. But this simply showed that an invisible connection was established between the filament and the plate and nothing more came of it at the time.

"Now, it's likely that even yet we shouldn't have had that discovery of Edison's used for the development of radio if it hadn't been for the new theory of what electricity really is. That theory is that everything is electricity. This chair I'm sitting on, the railing to this porch, the hat that Jimmy is holding in his hand—all that is electricity."

Jimmy gave a little jump at this, and held his hat rather gingerly at arm's length and looked at it suspiciously.

The doctor joined in the laugh that followed.

"Oh, you needn't be afraid that you'll get a shock," he said. "Electricity won't hurt you as long as it's at rest. It's only when it gets stirred up that high jinks are apt to follow."

Jimmy looked relieved.

"Now," continued the doctor, "the theory is that all matter is composed of an infinite number of electrons. An electron is the smallest thing that can be conceived, smaller even than the atom which used to be thought of as the unit. There may be millions, billions, quadrillions of them in a thing as big as a hickory nut. And when these electrons get busy you can look out for things to happen.

"Every hot object sends out electrons. That's the reason that the filament in the electric light tube sends them out."

"I suppose a red-hot stove would send them out, too," suggested Joe. "If that is so, I should think that people would have found out about them long ago."

"Ah, but there's this difference," explained the doctor. "The red-hot stove does send them out, but the air stops them. Remember that the atoms of which the air is composed are so large that the poor little electrons have no chance against them. It's like a baby pushing against a giant. It can't get by.

"Now the vacuum tube comes along, knocks out

the giant of the air, and lets the baby electrons get past him. The air is pumped out of the tube and the electrons have nothing to stop them. That's why Mr. Edison saw the needle on the plate begin to move, although the plate wasn't touching the filament. The electrons jumped across the gap between the filament and the plate because there was nothing to stop them.

"With this discovery of Mr. Edison's to aid him, a man named Fleming came along, who found that the oscillations caused by the flow of electrons to the plate could be utilized for the telephone by the use of what he called an oscillation valve that permitted the passage of the current in one direction only. That was the second important step.

"But these two steps alone wouldn't have made radio what it is to-day if it hadn't been for the wonderful improvement made by DeForest. He mounted a grid of wire between the filament and the plate connected with a battery. He found that the slightest change in the current to the grid made a wonderfully powerful increase in the current that passed from the filament to the plate. Just as when you touch the trigger of a rifle you have a loud explosion, so the grid magnifies tremendously the sound that would otherwise be weak or only ordinary. And by adding one vacuum valve to another the sound can be still

further magnified until the crawling of a fly will sound like the tread of an elephant, until a mere whisper can become a crash of thunder, until the ticking of a watch will remind you of the din of a boiler factory, and the sighing of the wind through the trees on a summer night will be like the roar of Niagara.

"But there," he broke off, with a little laugh, "I'm letting my enthusiasm carry me away. It's hard to keep calm and cold-blooded when I get to talking about radio."

"Well, you don't care to talk about it more than we care to hear about it, you can be sure of that," said Joe warmly.

"Yes," chimed in Jimmy, "to me it's more interesting than a—a pirate story," he added rather lamely.

"With the advantage," laughed Dr. Dale, "that the pirate story usually has lots of pain and misery in it for somebody, while the radio has nothing but benefit for everybody. Why, you can scarcely think of any experience in which the radio won't help. Take an Arctic expedition for instance. It used to be that when a ship once disappeared in the ice floes of the Arctic regions it was lost to the world for years. Nobody knew whether the explorers were alive or dead, were failing or succeeding, were safe and snug on board their ship or were shipwrecked and freezing on

some field of ice. Look at the Greeley expedition, when for months the men were freezing and starving to death. If they had had a radio outfit with them, they could have communicated with the outside world, told all about their plight, given the exact place they were in, and help would have gone to them at once. Not a man need have perished. So if a crew were shipwrecked on a desert island, they wouldn't to-day have to depend on a flag or bonfire to catch the attention of some ship that might just happen to be passing near the island. All they would have to do would be to send out a radio message—provided, of course, they had one from the wrecked ship's stores or had material to make one—and a dozen vessels would go hurrying toward them. Those naval balloonists that were lost in the wilds of Canada a couple of years ago, that other expedition that perished in the heart of Labrador, and similar cases that might be counted by the dozens—all could have been helped if they had been able to tell their troubles to the outside world. I tell you, boys, we haven't half begun to realize what the discovery of radio means to the world.

"Now all this leads us back to vacuum tubes, for it's only with them that all these things would be possible. Perhaps in the future something better yet will be invented, but they're the best we have at present. I'm heartily in favor of you

boys using a tube instead of a crystal, because it will give you vastly more enjoyment in your work. I wouldn't have more than one at the start, but later on it may be well to have more. I have a catalogue up at my house of the various makes and prices, and if you'll run up there any time I'll give it to you. At the same time I'll show you just how it's got to be inserted and attached. Maybe also I'll be able to help you in the making of the horn. I'll have to go now," he added, looking at his watch. "It's surprising how the time flies when we get on this subject. Good-bye, boys, and don't forget to drop in at the house whenever you can."

The radio boys watched the minister's straight, alert figure as he went rapidly up the street.

"Isn't he all to the good?" asked Bob admiringly.

"You bet he is!" agreed Jimmy emphatically, the others nodding their assent.

CHAPTER VII

BASEBALL BY WIRELESS

For the next week the radio boys worked like beavers. They had pored over the catalogue that, according to his promise, Dr. Dale had lent them, and, acting on his advice, had picked out a tube of well-known make that could be bought for a moderate price. They had had to send to New York for it, because Dave Slocum did not have just that kind in stock, and they were feverish with impatience until it arrived. In the period of waiting they pitched in and helped Jimmy with the horn, and even Herb became sufficiently infected by the energy of the others to turn to and do his share of the work.

The precious tube arrived on Saturday morning, and Bob, who had ordered it, was gloating over it when the other boys came over to the house.

"It's come at last!" he cried exultantly, holding up the tube for their inspection.

There were exclamations of satisfaction as the others gathered round Bob and examined it.

"And it's come just in time to get a good christening," declared Joe. "That is, if we can have everything ready by three o'clock this afternoon."

"What do you mean?" asked Bob.

"Why, I just read in the morning paper that the broadcasting station is going to send out the big baseball game between the Giants and the Pittsburghs at the Polo Grounds this afternoon," replied Joe. "They say that they're going to send out the game play by play, every ball pitched, every strike, every hit, every base stolen, every run scored, so that you can follow the game from the time the first man goes to the bat till the last man goes out in the ninth inning. What do you think of that?"

What they thought of it was evident from the chorus of jubilation that followed. All of them were ardent baseball fans, and in addition to that were good players themselves. Bob was pitcher and Joe first baseman on the High School nine, while Jimmy played a good game at short and Herb took care of the center field garden.

Naturally, with this love of the game, they were keenly interested in the championship races of the big major league ball teams and, during the season, followed the ups and downs of their favorites with the closest attention. That spring the race had been especially hot between the Giants

and the Pittsburghs. Both had started out well, and the Giants had cleaned up the majority of games in the East, while the Pittsburghs had been cutting a big swath in the West.

Now the Pittsburghs were coming to New York on their first invasion of the year, and interest ran fever high in the Metropolis and the section round about. The newspapers were devoting columns of space to the teams, and it was certain that there would be a record attendance at the game that afternoon.

"Bully!" cried Herb, as he danced a jig on the receipt of Joe's news.

"It will be almost as good as sitting in the grandstand behind the home plate," exulted Jimmy.

"Best thing I've heard since Sitting Bull sat down!" exclaimed Bob, as he clapped his friend on the shoulder.

"First time we'll ever have seen a championship baseball game without paying for it," laughed Joe.

"I wouldn't exactly call it seeing the game," said Bob. "But it's certainly the next thing to it. But now let's get busy so that we'll be sure to have everything ready by the time the game begins."

They needed no urging and worked so fast and well that by dinner time they had the tube and

horn arranged to their satisfaction. That left them time enough to go around among their friends and invite them to come in and enjoy the game with them. The invitation was accepted with alacrity, and some time before the hour set for the game to begin Bob's room was filled with expectant boys.

Naturally, Bob, as host, was a little anxious and nervous as the moment approached when his improved set would be put to the test. It would have been a mortifying thing for him to fail.

He felt sure that every attachment and connection had been properly made and that nothing essential had been overlooked. Still, it was with a certain feeling of apprehension that he turned the knob to tune in when his watch told him that it was three o'clock. The day was hot, and "static" was likely to be troublesome.

There was a moment of hissing and whistling while he was getting perfectly tuned. Then he caught it just right, and into the room, clear and strong, came the announcement of the umpire, repeated by the man at the broadcasting station:

"Ladies and gentlemen: The batteries for today's game are Blake and McCarthy for Pittsburgh, Hardy and Thompson for New York. Play ball!"

There was a roar of delight from the boys in the crowded room and a clapping of hands that made Bob's face flush with pleasure. But he held up his hand for silence, and the excited boys settled back in their chairs, listening intently so as not to miss a feature of the game.

Then followed, play by play, the story of the first inning with the Pittsburghs, as the visiting team, first at bat.

The hum of conversation had ceased in the room, and the boys leaned forward intently, anxious not to lose a syllable.

"Strike one!" came in stentorian tones.

"Ball one!" followed.

"Strike two!"

"Elton singles to center. Allison made a bad return of the ball, and Elton by fast running reached second. Maginn at bat."

"Strike one!"

"Maginn lays down a sacrifice between first and second and is out at first. Elton gets to third on the play."

It was evident that the Giant pitcher had not yet got into his stride, for he passed the next two batters, and the bases were filled with only one man out.

"He's as wild as a March hare," whispered Jimmy to Herb.

"Sure looks like a run with Krug coming up," replied Herb. "He can everlastingly lambaste the ball. He's made two homers this week already."

"Ball one," "ball two," "ball three," followed in quick succession.

"Looks as if he were going to pass him, too, to get a chance at Hofmeyer," murmured Joe.

"That would be poor dope, for it would force in a run," replied Bob. "I guess he simply can't locate the plate. It's funny the manager doesn't take him out."

"Krug hits a sharp grounder to Helmer," came the voice. "Helmer shoots the ball to Menken, forcing Ackerson at second, and Menken by a lightning throw gets Krug at first. Three out. One hit, no runs."

There was a ripple of applause at the snappy double play.

"That pulled the pitcher out of a tight hole all right," laughed Bob. "Gee, but I bet the Pittsburghs are sore. The bases full and only one man out, and yet they couldn't score."

"That's what makes a baseball game so exciting," returned Joe. "You can't be sure of anything. Just when you think the game is all sewed up something happens and the whole thing goes ke-flooey."

"Can't you imagine how the Giant rooters are

yelling their heads off at the Polo Grounds?" chuckled Jimmy.

The Giants in their turn at bat went out in one, two, three order.

"Ladies and gentlemen," came the voice a moment later: "Roberts now pitching for New York."

"I thought they'd take out Hardy," commented Herb. "He was as wild as a hawk in that first inning, and the manager isn't going to take chances."

In the next three innings neither side scored. Roberts, the new choice of the manager, was pitching like a house afire, and did not let a man reach first. The Pittsburgh pitcher was also on his mettle, and mowed his opponents down almost as fast as they came to the plate.

In the fifth inning, however, the Giants broke the ice.

"Wharton lifts a Texas leaguer back of second," came the voice. "Krug and Hofmeyer went for it, but the ball fell between them."

"Strike one!"

"Foul—strike two!"

"Miller lines the ball to right. Maginn, instead of waiting for the ball on the bound, rushes in to make a shoestring catch and the ball gets past him. Elton retrieves the ball and makes a great throw to the plate to catch Wharton, who

has rounded third and is racing for home. He slides under the catcher's arm and scores. Miller in the meantime makes third."

Again there came the murmur of applause that showed how the boys were wrought up by the play that they saw in their minds' eye almost as plainly as if it were right before them.

"Helmer hits to Hofmeyer," went on the voice, "and Miller is run down between third and home, the batter reaching second on the play."

"Ball one!"

"Ball two!"

"Helmer makes a clean steal of third."

"Ball three!"

"Guess the Pittsburgh pitcher is getting a little nervous," whispered Jimmy.

"That steal, together with the error in center, is getting his goat," assented Herb.

"Allison sends the ball on a line into the right field bleachers for a homer, scoring Helmer in front of him," the voice announced.

"Gee, but that must have been some clout!" ejaculated Joe. "That fellow sure can kill the ball."

The pause that followed told them as plainly as words of the yelling and excitement at the grounds that were holding up the game.

"Ladies and gentlemen," came the announce-

ment: "Ralston now pitching for the Pittsburghs."

"Batted the other fellow out of the box!" exclaimed Jimmy gleefully, who made no bones of the fact that he was rooting for the Giants.

"Him for the showers," agreed Herb, who was also a Giant adherent.

"I guess the Giants have put the game on ice," exulted Joe.

"Don't be too sure," warned Bob. "Those Pittsburghs are fence breakers, and they may stage a rally any minute. It takes more than a three-run lead to make them curl up."

That they were not going to "curl up" became evident as the game progressed toward its close. They fought like tigers for every advantage, made hair-raising stops and throws and slugged the ball ferociously. But a Giant fielder seemed to be in front of every ball, and when the Pittsburghs came up for their last inning the score was still 3 to 0 in favor of the New York team.

But in that ninth inning!

CHAPTER VIII

A THRILLING CLIMAX

It is certain that the Polo Grounds was a bad place for any one troubled with a weak heart during that ninth inning of the Giant-Pittsburgh game.

That the boys from the Smoky City were "out for blood" was evident from the moment that Elton, the first man up, faced the pitcher.

"Elton swings at the first ball offered and sends a screaming liner to left," proclaimed the radio voice. "It caromed off the left field wall and was skilfully handled by Miller, who by a quick return was able to hold the runner to two bags."

"Pretty good beginning," murmured Herb, shifting a little uneasily in his seat.

"Oh, that's nothing," Joe reassured him. "One swallow doesn't make a summer and one hit doesn't win a ball game."

"Maginn sends a grasser between second and third," continued the voice. "Elton scored easily

and Maginn reached second on a close decision."

"That saves Pittsburgh from a shut-out anyway," muttered Jimmy. "But I guess that'll be about all."

In this, however, he was mistaken.

"Wilson drives the ball on a line over second," went on the voice. "Menken made a great attempt to spear it but couldn't reach. A quick relay of the ball kept Maginn from getting beyond third, but on the throw-in Wilson reached second."

"Men on second and third and no man out!" ejaculated Joe.

"Those fellows have got their batting clothes on," commented Bob. "Did you notice that each one of them offered at the first ball pitched? I guess they've solved Roberts at last."

That the manager of the Giants had reached the same conclusion was evident from the pause that followed and the subsequent notice that Compton had taken Roberts' place in the box.

"Strike one!"

"Strike two!"

"That begins to sound better," Jimmy comforted himself.

His satisfaction was of short duration.

"Ackerson hits to deep short. The ball took a high bound and Helmer by a brilliant effort knocked it down, but too late to get the runner

at first. Maginn scored and Wilson reached third."

"That makes two runs," sighed Herb. "One more and they'll tie the score."

"And with two men on bases and nobody out, they're almost sure to do that much at least," muttered Bob. "It's too bad to have the Giants blow the game just when they had it in their kit bags."

The silence was almost painful as the boys waited for the next announcement.

"Ackerson steals second just beating Thompson's good throw by a hook slide."

Almost a groan went up in the crowded room. Some of the boys got so restless that they rose and paced the room, or sat forward in their chairs as though they were straining their eyes to look at the actual diamond.

"A single now will bring in two runs and put Pittsburgh in the lead," groaned Jimmy.

"And with Krug, their clean-up man at the bat!" said Bob glumly.

"Strike one!"

"Ball one!"

"Ball two!"

"He's trying to make him bite at bad ones," commented Herb.

"Strike two!"

"Ball three!"

"Now he's got Compton in a hole," murmured Jimmy. "He's got to put the next ball over."

"And if he does, I'm afraid that Krug will kill it," gloomed Joe.

There was a momentary pause.

"Krug hits a terrific drive to the box," announced the voice. "Compton leaps into the air and spears it with his left hand. He throws to Albers and catches Wilson, who had left the bag. Albers hurls the ball to Menken and gets Ackerson, who was trying to scramble back to second. Triple play, three men out and the Giants win, three to two!"

There was a moment of stupefaction in the crowded room. Then a roar broke out that brought Mrs. Layton up to the room in a hurry under the impression that something dreadful had happened.

"It's all right, Mother," laughed Bob. "We're only excited over the baseball game. It came out so unexpectedly that it took us all off our feet."

"You seem to be all on your feet, as far as I can judge," Mrs. Layton smiled back. "But you can make all the noise you want as long as you are happy," and with a wave of her hand she left them.

"A triple play!" exclaimed Bob hilariously. "The thing that happens only once in a blue moon.

Say, fellows, maybe we didn't pick out a corking game to christen our radio with!"

"And almost as good as though we were right at the grounds," cried Joe. "I've seen many a game, and I never got more real excitement over one than I've had this afternoon. I could almost hear my heart beat while I was wondering what Krug was going to do."

"And just think what it will be when the World's Series comes along in the fall!" chuckled Jimmy. "We'll take in every game without going out of Clintonia."

"That is, if it's played in the East," put in Herb. "It may not be so easy if it's played in the West."

"It doesn't matter where it's played," rejoined Jimmy. "By the time fall comes, we'll probably have improved our radio set so that we can listen in on Chicago just as easily as we have to-day on Newark. And, anyway, the results will be sent to the Newark station so that it can be broadcasted all over the East. We'll take them all in, never you fear, and we won't have to pay a fortune to speculators for the tickets either. But what is that I smell?" he broke off suddenly, sniffing the air that had become laden with savory odors.

"See his nose twitch," gibed Joe. "Trust him to forget baseball or anything else when doughnuts are around."

"Doughnuts!" exclaimed Jimmy, an expression of cherubic bliss coming on his face. "Can it be? Yes, there can be no mistake. It must be—it is—doughnuts!"

"Right the first time," laughed Bob. "I didn't want to say anything about it while the game was on, but Mother gave me a tip that she'd start making them so that we could have them fresh and hot by the time we were through. So come ahead downstairs, fellows, and if any of you get away without having your fill of about the niftiest doughnuts ever made, it will be your own fault."

There was no need of a second invitation, and the boys, with Jimmy in the van, hurried downstairs where several big dishes heaped high with crisp, delicious doughnuts awaited them. They fell to at once, and the table was swept clear as though by magic.

"That puts the finishing touch on a perfect day," sighed Jimmy, with perfect content.

"Right you are," agreed Joe. "And say, fellows, wasn't that a peach of a game?"

CHAPTER IX

THE LOOP

"Do you know, fellows," remarked Bob, as he was talking with his friends a few days later, "I've been thinking——"

"Bob's been thinking!" cried Herb. "Fire the cannon, ring the bells, hang out the flags. Bob's been thinking!"

"Are you sure it's that, or have you only been thinking that you've been thinking?" grinned Joe.

"When did it attack you first?" asked Jimmy, with great solicitude. "And where does it hurt you worst? Are you taking anything for it? You don't want to let it go too long, Bob. I knew a fellow who had that same trouble and didn't think it was worth while to send for a doctor, and before he knew it——"

Bob made a dive at him that Jimmy adroitly ducked, losing nothing but his hat in the process.

"Listen to me, you boneheads," Bob commanded, "and I'll try to get down on the same level with your feeble intelligence. I've been

thinking that perhaps we can better our set still more in the matter of aerials."

"Alexander always looking for new worlds to conquer," murmured Joe. "We nearly got killed the last time we bettered our aerial. What's the matter with the umbrella type? I thought that was the *ne plus ultra,* the *sine qua non,* the—the——"

"The *e pluribus unum,*" Herb helped him out, "the *hoc propter quod,* the *hic jacet,* the *requiescat in pace,* the——"

At this point his hat followed Jimmy's.

"The umbrella kind is good, all right," admitted Bob; "and, for that matter, I'm not dead sure that it isn't the best. It certainly gave us fine results in the baseball game on Saturday. But there's nothing so good that there may not be something better, and I thought it might be well to rig up a loop some day and try it out. If it works as well or better than the umbrella, we may use it when we come to set up our radio at Ocean Point."

"Is it a big job?" asked Herb, who as a rule was not on speaking terms with anything that looked like work.

"No," answered Bob. "It's easy enough to make. We'll just get Jimmy here to make a frame for it down in his father's carpenter shop——"

"Jimmy!" repeated that individual, in an aggrieved tone. "We'll just get Jimmy to make the horn. Sure! We'll just get Jimmy to make a frame. Sure! I suppose if one of us was marked out to die, you'd say, 'We'll just let Jimmy do it.' Just as easy as that."

"Stop right there, Jimmy," commanded Joe. "You'll have me crying in a minute, and it's an awful thing to see a strong man weep."

"After Jimmy has made the frame," continued Bob, not at all moved by the pathos of the situation, "all we'll have to do will be to wind it about eight times with copper wire. That will give us a lot of receiving area and capacity. The frame ought to be about four feet square. It'll have to be mounted on a pivot——"

"Let Jimmy make the pivot," murmured Jimmy.

"So that it can be swung end on in the direction of the broadcasting station," continued Bob, not deigning to notice the interruption. "It has to be pointed in that direction in order to get the message. If it were at right angles, for instance, we probably would hear only very little or perhaps nothing at all. You see, with that kind of aerial we don't have to put up anything on the roof at all. We could have it inside the room. It could be fastened to a hook in the ceiling, so that when we weren't using it we could hoist it up and get

it out of the way. That kind is used a lot on ships and at ship stations on shore. They call it sometimes a 'radio compass.' You can see it must be pretty good or they wouldn't use it so widely."

"It is good," broke in a bass voice behind them, and as they turned in surprise they were delighted to recognize in the owner of the voice Mr. Frank Brandon, the radio inspector, by whose aid they had been able to track down Dan Cassey, the rascal who had tried to defraud Nellie Berwick, an orphan girl, of her money.

There was an exclamation of pleasure from all of the boys, with whom Mr. Brandon was a great favorite.

"What good wind blew you down this way?" asked Bob, after the greetings and hand-shakings were over.

"A little matter of business brought me down to a neighboring town, and while I was so near I thought I would run over to Clintonia and call on my old friend, Doctor Dale," replied Brandon. "He told me that you boys won the Ferberton prizes," he continued, addressing Bob and Joe, "and I congratulate you. I wasn't surprised, for I knew you'd been doing hard and intelligent work on your sets. And I can see from the conversation I overheard that you're just as much interested in it as ever."

"More than ever," affirmed Bob, and the others agreed. "We're just crazy about it. We think it's just the greatest thing that ever happened."

"There are lots more who think the same thing," said Brandon, with a smile. "And I guess they're about right. By the way, there's an interesting thing about that radio compass you were speaking about that isn't generally known. I was over on the other side when the thing happened, and I got some inside dope on it."

"Tell us about it," urged Bob, and the others joined in.

"It was just before the battle of Jutland," replied Brandon, "which, as of course you know, was the biggest naval battle fought during the World War. The German fleet had been tied up in their own home waters for nearly two years, and hadn't ventured out to try conclusions with the British fleet that was patrolling the North Seas. In fact, it began to be thought that they never would come out. But at last the German naval leaders determined to risk a battle. They made their preparations with the greatest secrecy, because, their vessels not being as numerous as those of the British, their only chance of success lay in catching a part of the British fleet unawares before the rest of the fleet could come to their rescue.

"But the British naval authorities were on the

alert. They had this radio compass you were talking about developed to a high point of efficiency and were able to listen in on the orders given by the German commanders to their vessels. The Germans hadn't any idea that they could be overheard and used their wireless signals freely. Now, you remember that the battle took place on May thirty-first."

They did not remember at all, but they nodded their heads and tried to look as wise as possible. Jimmy especially had such an owlish expression that the others could hardly keep from laughing.

"On the night of May thirtieth," resumed Brandon, "the German flagship wirelessed a lot of instructions that were heard at several places on the British coast. These were compared and it was possible to ascertain just where the flagship was stationed. The next morning the flagship sent another lot of orders, that were also heard by the British. It was then found that the flagship had moved seven miles down the river from the station where she had been the night before. That showed that the fleet was on the move. Instantly the British fleet was sent out to meet them. So when the Germans came out to surprise the British, they found that it was the other way around and it was they themselves that were surprised. Well, you know the result. The German ships had to retreat to their harbor, and

they never came out again except to surrender after the war was over. That was one way that radio helped to win the war."

"Just as it helped our aviators," put in Joe.

"Precisely," assented Mr. Brandon. "The Germans are usually pretty well up in science, but we put it all over them in the matter of wireless while the war was on.

CHAPTER X

OFF FOR THE SEA SHORE

"But valuable as the radio was in war," Brandon went on, "I believe it is going to be still more valuable in the matter of maintaining peace. I think, in fact, that it may do away with war altogether."

"I don't quite get you," said Bob, with a puzzled air.

"In this way," explained Brandon. "It's going to make all the people of the world neighbors. And when people are neighbors they're usually more or less friends. They have to a large extent the same interests and they understand each other.

"Now, most wars have been due to exclusiveness and misunderstandings. Each nation has dwelt in its own borders, behind its own mountains or its own rivers, and they've shut out of their minds and interests all people outside of themselves. They've grown to think that a stranger must necessarily be an enemy. Some little thing happens that makes them mad and they're ready to fight.

"But the radio is going to break down all these barriers of exclusiveness and remove these misunderstandings. When people get to talking together each finds that the other one isn't such a bad fellow after all. When a man in Paris picks up his telephone and has a chat with one man in England and then another man in Spain and still another in Italy he finds that they are all human beings and very much like himself. If he had the Englishman, the Spaniard, the Italian in his office together, he'd probably invite them out to dinner and they'd all have a good time. When the time comes that in every country in South America men can tune in on the radio and listen to the inaugural address of the President of the United States coming from his own lips, they'll know that we have no unfriendly designs on their country and are only anxious to see them happy and prosperous. We'll hear the same speeches, we'll listen to the same concerts, and gradually we'll come to feel that we're all neighbors. That's why I say that the radio may in the course of time make all wars impossible, or at least very improbable."

"It sounds reasonable," commented Bob. "I only hope that you're right."

"I'm mighty glad that we happened to be in town when you dropped in to see the doctor," said Joe. "A few days later and we'd all have

been down at Ocean Point for the summer."

"Ocean Point!" exclaimed Mr. Brandon. "Is that where you boys are going?"

"Yes," replied Joe. "Our folks have a little colony down there, and we go every summer. Why, do you know anything about the place?"

"I should say I did!" replied Mr. Brandon. "I usually spend a week or two at Ocean Point myself, and I have a cousin there who has charge of the Ocean Point radio station. His name is Brandon Harvey. His first name you see is the same as my last name."

"Why, that's fine!" exclaimed Bob.

"Radio seems to run in your family," said Herb, with a smile.

"We'll look him up and introduce ourselves," said Joe. "We're all radio fans, and that's a sort of freemasonry."

"You'll find him a good fellow," said Brandon. "And I'm sure he'll be glad to meet you. If I happen to get down there about the same time that you do, I'll take you around and introduce you myself. You'll find that what he doesn't know about radio isn't worth knowing. He can run rings all around me."

"He must be pretty good then," laughed Bob. "Though I don't believe it. But it will be dandy if you are able to spend part of the summer with us down there."

"What time are you going?" asked Mr. Brandon.

"Just as soon as school closes," answered Bob. "The closing exercises are to be held next Wednesday, and we expect to get off the next day."

"Not losing any time, are you?" smiled Brandon. "Well, I'll see how I can fix it, and I shouldn't be surprised if you'd find me waiting for you when you get there."

They had reached the school gate by this time, and with cordial farewells they separated.

The next few days passed with great rapidity. The boys were busy in preparing for the closing examinations, and even their beloved radio had to be laid aside for a time. Bob and Joe had kept well up in their classes and did not anticipate much trouble in passing, but Jimmy and Herb had been more remiss, and it took many anxious nights and much "boning" to prepare for the ordeal.

However, they all got through, Bob and Joe with flying colors and Jimmy and Herb with marks that were at least respectable. And it was a happy group of boys who on the Wednesday afternoon that the school term came to a close tossed their books up on the shelves, not to be disturbed again until the fall.

But there is apt to be a fly in the ointment, and the fly on this occasion was the news that Jimmy

passed on to his companions the night before they left for Ocean Point.

"Say, fellows, who do you think is going down to Ocean Point for the summer besides our bunch?" he asked, almost out of breath with the haste he had made to come over to the Laytons' house, where the friends were seated on the porch enjoying the evening breeze after a hot day.

"President of the United States, for all I know," answered Joe flippantly, as he fanned himself with his cap.

Jimmy glared at him.

"It can't be the old Kaiser," said Herb. "Don't tell me, Doughnuts, that it's the Kaiser."

"Worse than that," answered Jimmy. "Buck Looker and his gang are going to be there."

There was a general straightening up of his astonished hearers.

"What?" ejaculated Bob. "I'm knocked all in a heap!"

"Say that again," demanded Joe. "Or, rather, don't say it again. Let me think it's all a horrible dream."

"Sure as shooting," affirmed Jimmy. "I was in Dave Slocum's store when Mr. Looker came in to get some fishing tackle. He got to talking to Dave, and told him that he was going to take his family down to Ocean Point for the summer, and that Buck was going to take a couple of his friends

along with him. He didn't say who the friends were, but of course we know it wouldn't be any one but Carl Lutz and Terry Mooney. In fact, those are the only fellows he hangs out with. None of the decent fellows in town will have anything to do with him. So what do you think of that?"

"Punk!" declared Joe.

"It's a shame that we can't get rid of that gang even in vacation time," said Bob. "Half the fun of getting through with school was the thought that we wouldn't have to look on Buck's ugly face for a couple of months."

"It's lucky the air down at the Point is salt, or Buck would poison it," remarked Herb disconsolately. "That fellow's a regular hoodoo."

"Oh, well," Bob comforted himself, "we don't have to mix up with him, anyway. He won't be living in our little separate colony, and our folks and his never had anything to do with each other. It'll probably be only once in a while when we have to come across him. And it's more than likely that he'll steer clear of us, for he knows he's about as popular with us as a rattlesnake at a picnic party."

"If he tries any of his low-down tricks there won't be any Mr. Preston to save him again from a licking," put in Joe. "But let's forget him and think of something pleasant."

The women of the party had gone that same day to the Point in order to get everything ready for the coming of the boys and their sisters on the morrow. The fathers were still in town, where business or profession detained them. Their plan for the summer was to go down to the Point for the week-ends only.

Dr. Atwood, Joe's father, had taken his wife and the other women down to the resort in his spacious car early in the morning. It was only a pleasant spin of about forty miles, and after seeing them comfortably settled, he had returned in order to take the boys and girls down on the following day.

He found on his return, however, that a friend of Herb Fennington's sisters, Agnes and Amy, had arranged to take the girls down early that evening. They had asked Rose Atwood to go down with them, so that left only the radio boys to take the trip down the next day in the doctor's car.

And as the boys had to pack their suitcases and get their fishing tackle and other sporting material together they stayed chatting only for a little while on Bob's porch that evening and separated early.

The next morning dawned gloriously and gave promise of a perfect day. The doctor was on hand at about ten o'clock, and the boys bundled

into the car, full of the highest spirits and looking forward to a summer of unalloyed fun and sport.

The doctor himself drove, and the car, under his skilful handling, made rapid time along the beautiful roads. The boys joked and laughed and sang and enjoyed themselves to the full. They were like so many frisky colts let out to pasture.

As they passed through the little town of Lisburn they saw a young girl watering the flowers in the garden of one of the houses. Bob's keen eye detected and recognized her at once.

"It's Miss Berwick!" he cried. "Doctor, would you mind stopping here a minute?"

"Certainly I'll stop," replied the doctor, with a smile, and slowed down immediately. "Take all the time you want."

Bob and Joe jumped out and ran to the gate. The girl looked at them for a moment and then with a glad cry came hurrying toward them.

"How glad I am to see you," she cried, extending both hands in welcome. "Come into the house."

"Thank you," answered Bob. "We'd like to, but we're with a party and can stay only a minute. But we had to stop to say how do you do and ask you how everything was going with you."

"Couldn't be better," she answered, with a

smile. "I've got my health back completely. And I have my house, and my mind's at rest, thanks to you two boys. I'll never forget what you did for me in rescuing me from that wrecked auto and then later in getting that mortgage back from the man who was trying to cheat me."

"Oh, what we did was nothing much, and anybody else would have done the same thing," disclaimed Bob. "But tell us about that rascal, Dan Cassey. Have you seen or heard anything about him?"

"Only once," replied Miss Berwick. "He came back to this vicinity to wind up his affairs and get out. I met him one day on the road when no one else was about. I was going to pass him without speaking, for I dread the man almost as much as I despise him, but he planted himself in my way and went on dreadfully about you boys. Said he was going to fix you for butting into his affairs—those were the words he used. Some one came in sight just then and he passed on. But what he said has worried me. I do hope you boys will keep on your guard against him. I'd feel dreadful if anything happened to you for being so good to me."

"Don't worry about us," Bob adjured her. "We're able to take care of ourselves."

"Did he stutter as much as usual?" asked Joe, with a grin.

"Worse, if anything," Miss Berwick answered. "He had to whistle to go on."

They all laughed, and after a moment more of conversation and repeated warnings from the girl to be careful, the boys said good-bye and went to the car. She waved to them until the car was out of sight.

The doctor put on a little extra speed to make up for the delay, and the car purred along the road until finally Ocean Point came in sight. A cry of delight broke from the boys as they saw the ocean stretched out before them, that shimmering, sunlit ocean that seemed so friendly now, but whose menace and danger they were soon to feel.

CHAPTER XI

A LONG SWIM

"OCEAN POINT strikes me as being just all right," said Bob, as he stretched out luxuriously in one of the comfortable chairs on the shady porch.

"Right you are," agreed Joe, heartily. "We ought to acquire a coat of sunburn here that will last over the winter and into next spring."

"It wouldn't take long out in that sun to get cooked nice and brown on both sides," said Bob. "It's going to be hot work putting up the aerials."

"Yes, but the best of it is that, no matter how hot you get, you can always cool off again in jig time by taking a dive in the ocean," said Joe. "And that's what I'm going to do pretty soon, too."

"You won't have to go alone, I can promise you that," said Jimmy. "I don't want to go in before we get the antenna strung up, though, because when I once do get there, I shan't want to come out in a hurry."

"You'll come out soon enough, Doughnuts, when you find a big shark chasing you," said Herb, with a sly wink at the others. "I've been told that there's a big man-eating shark around here that's just lying in wait for somebody to come in and furnish a nice dinner for him."

"Shark, nothing!" exclaimed Jimmy. "Anyway, if there were sharks around here, they'd be just as apt to eat you or Bob or Joe as they would be to go after me."

"Not a bit of it," said Herb seriously. "This shark I'm telling you about doesn't care for any one but very fat people. That's what makes me think it would be dangerous for you to go in."

"Well, I don't know that I can blame the shark for preferring me to you," said Jimmy, refusing, with the wisdom born of long experience, to take Herb's story seriously. "If the shark swallowed you, I'll bet he'd die of indigestion afterwards."

"All right, then, do as you please, but don't say I didn't warn you," said Herb resignedly. "You don't get much gratitude for trying to do people favors anyway, I've found."

"If you fellows put as much energy into getting that aerial strung as you do in chinning with each other, we'd be receiving messages by now," said Bob, laughing. "Let's get busy and get things fixed up, and then we'll go down and see if there's any sign of that shark friend of Herb's."

The radio boys all agreed to this, and without further delay took up the business of stringing the antenna. They had brought two masts with them, and these they proceeded to mount on the roofs of the two bungalows occupied by the Laytons and the Atwoods. These were so situated that the umbrella antenna ran directly over the community living room, thus giving an ideal condition for sending, as the boys intended to set up their apparatus in the big living room, so that everybody in the little colony could get the benefit of the nightly concerts and news bulletins sent out by the big broadcasting stations.

As the radio boys had surmised, getting up the aerial was a blisteringly hot job, and before they had been at it many minutes the perspiration was running off them in streams. They kept doggedly at it, however, and at last the final turnbuckle had been tightened up, and everything looked taut and shipshape.

"There!" exclaimed Bob, looking with satisfaction at the result of their labors. "I guess it will take a pretty strong gale to knock that outfit over."

"A cyclone, you mean," said Joe. "I don't think anything short of that would even bother it."

"Well, we'll hope not," said Bob. "Who's going for a swim? It would take a whole school

of sharks to keep me out of the water now."

The others were of the same mind, and it did not take them long to jump into their bathing suits and make a dash for the white beach. A gentle surf was breaking with a cool, splashing rumble that seemed almost like an invitation to come in and get cool. The boys were not long in accepting it, and dashed in with shouts and laughter. They were all good swimmers, and they gave themselves up to the delight of breasting the incoming breakers, rising and falling with the slow heave and swell of the cool, green ocean. Puffing and blowing, flinging the spray from their eyes, they passed beyond the surf, and then slowed down, just exerting themselves enough to keep their heads above water.

"Wow!" exclaimed Jimmy. "This is the life, eh, fellows?"

"I'll say so!" agreed Bob. "Where's that shark of yours, Herb?"

"Oh, I suppose he's away visiting some friends of his," said Herb. "But if you wait around long enough, we'll probably see him. Just have a little patience, can't you?"

"All the patience in the world," laughed Joe. "I don't really care how long he stays away, myself."

"He couldn't catch me if he did come around,"

boasted Jimmy. "I'll bet none of you hobos can catch me, anyway," and he was off in a smother of foam.

This was a challenge not to be overlooked, and the rest were after him like hounds after a fox. Jimmy soon found it an impossibility to make good his boast, and before he had gone fifty yards he was overhauled by Bob, and then by Joe. Herb did his best for a while, but soon decided that it was more trouble than it was worth, and turned over on his back and floated instead.

"Why, you couldn't beat a lame crab, Doughnuts," chaffed Bob, as they all slowed up to get their wind. "I thought from the way you talked that you were the boy wonder of the world."

"Oh, I don't care. I made you fellows work hard, anyway," panted Jimmy, puffing out a mouthful of water that he had inadvertently shipped. "This is one place where I can exercise without getting overheated, anyway."

"No danger of that," said Joe. "I'm about ready to go in for a while. How about you fellows?"

"Guess it might be a good idea," said Bob. "We're out further than I thought, as it is."

In fact, when the boys looked toward the shore, it did look a long distance away. But they swam in easily, with long, easy strokes, reveling in the

clean tang of the salt water and the joy of the brilliant sun on their faces as they clove through the sparkling waves. Before long they had reached the outer line of gentle combers, and let themselves be carried shoreward in a rush and swirl of white foam. A little further, and they felt the hard sand of the beach, and got on their feet, somewhat winded, but intoxicated with the joy and sense of glorious well being that comes of salt spray, glinting sun, and salty breeze.

"That was the greatest ever!" exclaimed Bob, flinging himself down in the soft, hot sand. "Fresh water is all right, but give me old ocean for real sport."

Each boy burrowed out a comfortable nest in the sand, which felt very warm and grateful after the cold sea water. But it was not very long before the sun began to make itself felt, and pretty soon their bathing suits were steaming.

"Say!" exclaimed Jimmy, at length, scrambling to his feet, "it's me for the water again. I can begin to feel my skin drying up and getting nice and crispy. Who's game for another swim?"

It appeared that they all were, and with shouts and laughter they once more dashed into the surf. They did not stay in so long this time, however, as it was drawing on toward evening, and they all had ravenous appetites that told them it must be nearly supper time.

Jimmy was the first to put this thought into words.

"I feel as though I hadn't eaten anything in days," he remarked. "I've often heard that salt water was a great thing to give a person an appetite, and now I know it."

"Yes, but I don't believe that you have to come all the way to Ocean Point, Doughnuts, to get one," said Herb. "I don't see how you could very well eat more than you do when you're in Clintonia."

"Huh! I don't suppose you feel hungry at all, do you?" asked Jimmy.

"Well, I must admit I feel as though I could punish a pretty square meal," said Herb. "But if I were as fat as some people I know, I'd be ashamed to talk about eating, even."

"Maybe if I floated around on my back while I'm in the water, instead of really swimming, I wouldn't feel so hungry, either," said Jimmy scathingly, and this turned the laugh on Herb.

"He's got you there, Herb," said Bob. "If you keep on you'll be getting fat yourself. If you ever do, you'll be out of luck, because Jimmy will never get through pestering you about it."

"I guess I won't have to worry about that for a while yet," said Herb. "It will take me a good many years to catch up with Jimmy."

"Don't you worry about me," said that ag-

grieved individual. "I don't worry about you just because you look like an animated clothespin, do I?"

Herb was still trying to think up some fitting reply to this when his meditations were cut short by their arrival at the little bungalow colony.

There were several small bungalows grouped about one much larger one. This latter contained a large dining and living room and a kitchen big enough to supply the needs of all the families residing in the smaller buildings. It was in this large central living room that the boys had started to set up their radio apparatus when the lure of the ocean had tempted them away.

They returned none too soon, for the evening meal was ready, but, as Joe remarked, "It was no more ready than they were." They did all the good things ample justice, and then went out on the wide veranda to rest and allow digestion to take its course.

"We ought to be able to get the set working this evening," remarked Bob, as they sat looking out over the sand, with the boom of the surf in their ears, "provided, of course, we all feel energetic enough to tackle it."

"Well, I'm willing to take a fling at it a little later," said Joe. "But just at present I don't feel strong enough even to handle a screw driver."

"I'll bet Jimmy's crazy to get to work, any-

way," said Bob. "How about it, old energetic?"

But the only answer was a gentle snore from Jimmy's direction, and everybody laughed.

"Guess that swim has tired him out," said Joe. "Swimming in salt water always seems to leave you mighty lazy afterward."

"You boys must be more careful when you go swimming, and not go out so far from shore," said Mrs. Atwood, Joe's mother. "This afternoon I was watching you from the porch, and it seemed to me you went for a dreadful distance before you started back."

"Oh, that's two-thirds of the fun of swimming, Mother," said Joe. "There's no use in puttering around close to shore. What's the use in knowing how to swim, if you do that?"

"We keep pretty close together, anyway," Bob added. "So if one should get tired, the others could help him in."

"Yes, I know," said Mrs. Atwood. "But just the same, I wish you'd be careful."

The boys promised that they would, and then, feeling somewhat rested, they woke Jimmy, after some difficulty, and went inside to rig up their receiving set.

CHAPTER XII

THE RADIO STATION

"JUST when I was having a swell nap, too," complained Jimmy. "Somebody's always taking the joy out of life."

"Never mind about that now, Doughnuts," said Bob. "Just grab hold of a screw driver and open some of these boxes. There's nothing like a little exercise to drive the sleep out of your eyes."

"You'll find sympathy in the dictionary, Jimmy," said Joe heartlessly.

"Yes, and that's about the only place I will find it around here," said Jimmy. "But give me the screw driver. Somebody's got to do all the hard work, and I suppose I'm elected, as usual."

In spite of his grumbling, he worked faithfully, and soon had the lids off a number of mysterious looking boxes, from which the boys got out much complicated looking apparatus. They had brought Bob's set, the one that had been awarded the big

prize the previous spring, and Bob handled this lovingly.

All the radio boys worked with a will, and the way in which the various apparently unrelated parts became connected up into a compact and highly efficient receiving station was surprising. After two hours of steady work they had the set in condition to test.

"I don't think we've forgotten anything," said Bob, carefully going over the various connections. "Everything looks all right to me, so here goes to test it out."

And sure enough, it was not long before they heard the familiar call of the big Newark broadcasting station and were listening to a big band perform in stirring style.

"That sounds familiar," said Joe, as the band finished its selection with a flourish. "It doesn't seem to be any different than when we were in Clintonia, even though we're considerably further away from the sending station."

"I guess a few miles don't make much difference to old man Electricity," said Herb.

"It wouldn't make any difference to me, if I could travel as fast as he does," grinned Jimmy.

"You've got to train down a good deal before you can do that," remarked Herb.

"Well, I guess my chances of traveling one hundred and eighty six thousand miles per second

are about as good as yours, anyway." retorted Jimmy.

"Who's talking about traveling at such extremely high rates of speed?" asked a voice behind them that they all recognized. Turning, they saw Frank Brandon, the government radio inspector who had been of so much assistance to them a few months before in locating the scoundrel, Dan Cassey.

"Glad to see you. Sit down and make yourself at home," they chorused, and almost before he knew it the radio inspector found himself seated in the most comfortable chair with a set of earphones over his head.

"You see, I haven't lost any time coming to see you, as I promised," he remarked. "I spoke to my cousin, Brandon Harvey, about you fellows, and he said to bring you up to the big station any time you wanted to go, and he'd show you all around it."

"That's fine!" exclaimed Bob. "That's what we've all been wanting to see for a long time. I think we'll take your cousin at his word and land down on him to-morrow. How about it, fellows?"

This met with the enthusiastic approval of all the radio boys, so it was settled that they should go to the big station early the following day,

where Frank Brandon would be waiting for them and would introduce them to his cousin.

Accordingly, they set out the next day immediately after breakfast. The station was located something over a mile from the bungalow colony, but it was a beautiful day, and the walk seemed like nothing to the boys. The antenna of the station covered a large tract of land, and the station was capable of sending and receiving messages of almost any wave length. The station itself was a snug-looking building, ample enough to accommodate all the apparatus, and provide comfortable sleeping quarters for the operators as well.

As the boys approached this building they could see their friend, the inspector, sitting on the porch. When he caught sight of the boys he rose and stood waiting for them.

"You're earlier than I expected you," he said. "You must have set the alarm clock away ahead."

"No, not that. But we had a hunch that there would be a lot to see, and we thought the earlier we started the better it would be," said Bob. "Besides, we didn't want to keep you waiting."

"I've only been here a few minutes myself," replied Brandon. "Come inside, and I'll introduce you to my cousin. He's even more of a radio fan than I am."

The boys followed him into a large, well-lighted room that seemed literally packed with electrical apparatus. Switchboards, dials and various recording instruments lined the walls, while in one corner stood a glittering high frequency alternator. Seated at a table covered with wires was a young fellow of about Brandon's own age, who looked enough like him to proclaim their relationship.

At the time the radio boys entered he was receiving some message, but as soon as he had finished he took the headphones off and turned to greet his visitors.

He and the boys were introduced, and their common interest in radio work made them all feel like old friends in a short time.

"I suppose you fellows want to see all there is to see," said Brandon Harvey, after they had chatted on general subjects a few minutes. "We have a pretty complete layout here, and I'll be glad to show you around and tell you all I can about it."

The boys were not slow to avail themselves of this offer. The radio inspector volunteered to substitute for his cousin while the latter was busy with the boys, which left Mr. Harvey free to explain the bewildering details of the plant to his guests.

"I wouldn't take this much trouble with every-

body," he said. "But Frank tells me that you fellows are so interested in the subject and have studied it up so much that you'll be able to understand what I show you. Lots of people come in here that know absolutely nothing about radiophony, and expect me to explain the whole science to them while they wait."

"They'd have to wait a long while," grinned the irrepressible Jimmy. "I've just about learned enough about it to know I don't know anything, if you understand what I mean."

"I get you, all right," returned Harvey, with a smile. "I've worked at it a long time myself, but as it is I can hardly keep up with all the new developments. There seems to be something new discovered every day."

All that morning he took the boys about the plant, showing and explaining the various instruments. Some of these the boys were familiar with, while others were entirely new to them. But by dint of asking many questions, which were answered with great patience by the wireless man, they obtained a reasonably clear idea of the functions of the various parts and their relations to each other, and when they finally departed they felt that they had learned a great deal. Harvey even allowed them to "listen in" to messages arriving from big ships hundreds of miles out at sea.

"Well, we've had a wonderful morning and learned a lot, but I guess we must have tired you out, Mr. Harvey," said Bob, as the boys were taking their leave.

"Not a bit of it," denied the radio man. "I'll be glad to see you any time you want to drop in. Lots of times there isn't much coming in, and it gets pretty lonely around here."

"You can bet we'll be only too glad to come," said Bob, and the boys left with many expressions of friendliness on both sides.

"We're in luck to be located so near this station and to be friends with one of the operators," said Joe, as the boys started homeward.

"We surely are!" agreed Bob. "I know I feel as though I'd learned a good deal this morning, and I guess you fellows do, too."

"Mr. Harvey is certainly a prince," declared Jimmy enthusiastically. "He answers questions without making you feel as though you were a natural born fool for having asked them, the way some teachers I know do."

"Yes, we'll have to take advantage of Mr. Harvey's invitation and visit him often while we're down here," said Bob. "He even promised that he'd give me lessons in sending when he had time."

"Good enough!" exclaimed Joe. "It's lots of

fun receiving, but that's only half the game. We ought to be able to send, too."

"If you like, we'll study up on the code a little this evening," said Bob. "I brought the book with me. We've already got so much from it that we ought to be able now to finish up."

"I agree to that," said Joe, and so that was settled.

"How quiet the ocean is to-day," remarked Herb, as they noted how little surf there was and how lazily the waves were breaking on the beach.

"You wouldn't think there was anything cruel about it to look at it now," said Jimmy. "And yet we know that it is about the most cruel thing in the world."

"It's taken millions of lives without the least thought of mercy," put in Bob thoughtfully. "To-day it's like a tiger asleep. But it's a tiger just the same, and when it wakes up—then look out!"

CHAPTER XIII

EXCITING SPORTS

By this time the boys were almost home, and their pace was accelerated as they drew near by the sound of a musical and welcome dinner bell. In fact, walking seemed entirely too slow under the circumstances, and the last hundred yards was covered in close to record time.

"I was beginning to think something dreadful had happened to you," said Mrs. Layton, as they dashed panting up on the porch. "Was the wireless station so interesting, then?"

"I should say it was!" said Bob, answering for all of them. "We'll tell you all about it while we're eating lunch."

This was not so easy to do, however, as the feminine portion of the family had not the interest in wireless possessed by the boys.

"Instead of going to that old wireless station, why don't you boys go and catch some crabs for us once in a while?" queried Rose, Joe's sister. "We've heard that there are lots of them in that

inlet back of the beach, and I don't see why you couldn't catch some just as well as not."

"Girls do have good ideas once in a while, don't they?" said Joe. "What do you say to going crabbing this afternoon?"

"Great!" his chums exclaimed, and resolved to start on the expedition immediately after lunch. In anticipation of this, the grown-ups had brought crab nets with them, so it only remained to secure some chunks of meat as bait, and the boys were off to the beach intent on reducing the number of the crab population. Rose Atwood and Agnes and Amy Fennington had been invited to go, too, but had refused on the ground that while they liked crabs after they were cooked, they did not like them while they were alive.

"Don't know that I blame them much," said Jimmy, commenting on this. "A crab is a mean customer, and can give you a bad nip from those big claws of his."

"The idea is not to let him get close enough to do it," said Herb.

"I know that's the idea, all right," said Jimmie. "But sometimes it doesn't work out."

"We don't have to worry about that yet," said Bob. "Chances are we won't see a crab all afternoon. It usually happens that way, it seems to me."

But contrary to this prophecy the boys saw

many crabs. There was a wide, shallow inlet where the ocean had worked a way in back of the beach for a considerable distance. At high tide the water here was several feet deep, but at low tide it was anywhere from six inches to a foot. Many crabs were washed in here with the tide, and remained after the tide had gone out. They had a way of hiding under bunches of seaweed, and when dislodged would go scuttling away along the sandy bottom for dear life. It looked easy to drop the crab net over one of these awkward creatures, but the boys soon discovered that it was more difficult than it appeared. The crustaceans exhibited a surprising nimbleness, and in addition, when they were in imminent danger of being captured, had a trick of suddenly changing their course and darting toward their pursuers with claws waving and giving every evidence of being willing and able to do battle.

The boys were in their bathing suits, and as they waded barefooted through the shallow water, they found the sport more exciting than they had anticipated.

"Gee!" exclaimed Jimmy, making a wild dash for shore, after a sudden but futile sweep of his net into the water. "That fellow was after my toes as though he meant business. I'd about as soon tackle a cage full of wild tigers as these man-eating crabs."

"Stick to it, Jimmy," said Bob, as he deftly scooped up a struggling crab in his net. "At the worst you'll only lose a leg or two."

"Yes, and what's that to the pleasure of having nice fresh crabs for dinner to-night?" said Herb. "You don't go at it in the right spirit, Doughnuts. Just watch—yeow! ouch!" he ended, with a yell, and kicked out wildly with one foot, to which a crab, a determined and stubborn crab, was clinging.

Joe, who was nearest, lashed at the clinging crustacean with his net, and caught the creature fairly in the middle with the iron frame. The crab dropped back into the water, and Herbert dashed to the safety of the beach.

"Oh, my poor foot!" he groaned. "I'll bet that confounded crab could pinch the propeller off a battleship."

"Oh, don't mind a little thing like that," said Jimmy vengefully. "Just think of the nice crabs you'll have for dinner to-night, and it won't hurt any more."

"Oh, shut up!" exclaimed Herb, for Bob and Joe, while they were sorry for him, could not help laughing at his woebegone appearance. "It won't be as much fun when one of you gets nipped."

"I get out before they have a chance to catch me," said Jimmy.

"Well, you'd better get in again, and do some

catching yourself," said Joe. "Bob and I aren't going to catch them for the whole bunch. Just make a swipe at them with the net as soon as you see them. Don't chase along after them first, because then they know you're after them, and they turn and go for you."

Herbert was rather doubtful about venturing back into the water. But he knew the others would never get through chaffing him if he did not; so, after nursing his injured foot awhile, he ventured in. Following Joe's advice, he escaped further accident, and at the end of a couple of hours the boys had enough crabs in their baskets to supply the whole four families.

"It seems to me there must be an especially wicked and scrappy lot of crabs in this neighborhood," said Bob. "Just look at them in the basket. They're fighting each other just as though they enjoyed it."

"Probably they do," said Jimmy. "A crab is foolish enough to like anything."

"They remind me of Buck Looker and his gang," said Herb, laughing. "They're always on the lookout for trouble, and they usually get the worst of it when trouble comes along."

"Yes, but these fellows are real scrappers, while Buck is just a big bully," said Bob. "I wonder if they've come to Ocean Point yet. I

suppose if they had, we'd have seen something of them."

"Oh, I suppose they'll come pestering around as soon as they get here," said Joe. "But if they do, I guess we'll be able to take care of them."

"We'll do our best, anyway," said Bob. "They're still sore about the way we broke into their shack after they'd stolen Jimmy's wireless outfit."

"It only served them right," said Jimmy. "I think we let them off pretty easily that time. Next time we'd better rub it in a little harder."

"Well, don't let's spoil a perfect day by thinking about that crowd," said Joe, shouldering the basket of crabs. "I'll carry this until my back begins to break, and then somebody else can have a chance at it."

"That's fair enough," assented Bob, and the boys started for home, well pleased with the result of their expedition. There were so many jokes bandied back and forth that Joe forgot all about the weight of the basket, and it was only when he threw his load down on the porch that he remembered that none of the others had done his share. And by that time it was of no use to protest.

"Well!" exclaimed Rose, when she saw the laden basket, "old Izaak Walton didn't have anything on you. I never had any idea that you'd

catch as many as that. To tell the truth, the honest truth, I didn't think you'd catch any."

"That's all the confidence my sister has in me, you see," said Joe, with a resigned air.

"They're all alike," said Herb. "They none of them really appreciate what a blessing it is to have a brother."

"We do appreciate it once in a while," returned Agnes. "Especially when they work up energy enough to go and catch some nice fat crabs. I just dote on crab salad."

"If you only knew how close your brother came to losing his foot on account of those same crabs, you'd feel sorry for him," said Bob, with a mischievous grin.

"Oh, do tell us about it," said Amy. "What happened, Herb?"

"Aw, why can't you keep quiet about that, Bob?" protested Herb.

But the girls were not to be put off so easily, and had to be told the story of Herb's defeat at the claws, as it were, of one small crab.

"Well, I don't care," he said, goaded by the laughter of the girls, "I'll get even by eating as many of those animals as I can, and maybe one of them will be the one that bit me."

"It won't do any harm to think so," said Bob. "I hated to tell on you, Herb, but that story was too good to keep."

"All right! I'll get even with you some day," threatened Herb. "It's just your confounded luck that you didn't get nipped instead of me."

"Oh, well, it's all in the day's fun," said Bob. "I'll bet these fellows will taste so good we'll forget about the trouble we had while we were catching them."

This prophecy was fully justified that evening when the unfortunate crabs disappeared as if by magic.

"We'll have to try this again some day soon," said Bob. "I never knew a crab could taste so good."

They all agreed to this, and were still discussing the afternoon's fun when they heard a familiar voice on the porch, and a moment later Dr. Amory Dale walked into the room. They all sprang to their feet and gave him a hearty welcome.

He told them all the local news of Clintonia, and then broached the real object of his visit. He had conceived the idea of making up a party consisting only of the adults and taking a tour through the South, taking in Washington and other of the larger Southern cities. As outlined by him, the party was to go by rail, and return by steamer from Norfolk, Virginia, to Boston.

"Mrs. Dale has not been well recently," he concluded, "and, as the doctor has ordered a change

of scene for her, I thought it would be nice to get a small party of friends and all take the trip together. What do you think of the proposition?"

All the adult members of the party received the idea with approbation, although for one reason or another some of them feared that they would be unable to go. Their objections were argued away by Doctor Dale, however, and before the evening was over Mr. and Mrs. Layton, Mrs. Plummer, and Mrs. Atwood had promised to make the trip. Rose begged so hard to go that finally she, too, was included. The rest of the evening was taken up by excited discussion of the proposed trip. Dr. Dale was urged to stay all night, and finally, as it was getting late, he agreed. He found time to question the boys about their trip to the big wireless station, and they told him enthusiastically all about it. The evening passed so quickly that they were all surprised to find that it was considerably past their usual bedtime, and it was a tired but happy quartette of lads that finally said "good-night" and left the older people to complete the plans of their forthcoming trip.

CHAPTER XIV

FUN IN THE SURF

THE next morning the boys learned that the tourists had decided to leave on the following day. Mrs. Fennington, Herbert's mother, had decided to stay at Ocean Point and "take care of the boys and her girls," she said. All that day there was great excitement and bustle of packing, and by evening all was ready for the tourists' departure. Everybody went to bed early that evening, as they intended to get the early train to Clintonia, whence they were to go direct to Washington.

Everything went according to schedule, the boys going down to the station with their parents to see them off. Many were the injunctions laid on the boys to "be careful" and "not to swim out too far." This was duly promised, although the boys prudently forebore to say just what they considered "too far." Anything less than a mile was all right, as they figured it.

At last the train pulled out, and after it was lost

to view around a curve the boys took their way rather more quietly than usual back to the bungalows, which seemed to them to wear a rather forlorn and deserted air. But their usual good spirits soon asserted themselves, and they began to plan what they should do for the rest of the day.

"It's a swell day for a swim," said Bob. "Let's jump into our bathing suits and fool the hot weather."

"I'll never say no to a swim," said Jimmy. "It seems to me that all I do all summer is melt and sizzle except when I can get into the ocean. That's about the only time I feel comfortable."

"A swim it is, then," said Joe. "And the last one down to the beach gets thrown in by the others."

There was a mad scramble as the boys rushed into their respective bungalows and changed from regular clothes to bathing suits. Articles of clothing flew in every direction, and in an incredibly short space of time Joe emerged, followed closely by Bob, and they set off at an easy pace for the beach, looking backward from time to time to see if the others were coming. Jimmy was the next to emerge, and he started off with head down and hands and feet flying, evidently determined not to be the last this time.

But he had hardly started when Herbert came

bursting out of the door and made after his corpulent friend. But Jimmy had gained quite a lead, and it was hard to predict which would be the last to the beach and therefore subject to a thorough ducking at the hands of his friends.

Bob and Joe were so far in the lead that they were in no danger, and they enjoyed the race between Jimmy and Herb immensely.

"They say an elephant can run fast, and Jimmy's just like one," said Joe. "He's certainly putting his heart into it. Which do you think will win, Bob?"

"It's hard to tell," laughed Bob. "But if Jimmy loses he'll be so hot that he won't mind being ducked, so it will be all right anyway."

They were all close to the beach now and Herb was fast catching up with Jimmy, who was making heavy weather of it in the deep sand. Herb kept gaining. He was not three feet back of Jimmy when suddenly the latter stumbled and fell. Herb was so close to him that he had no time to stop or swerve, and he tripped over his prostrate companion and went sprawling. Like a flash Jimmy was on his feet again, and before Herb could recover from his fall and get started again, Jimmy had reached the edge of the water, where Bob and Joe were already waiting.

Herb came along a few seconds later, primed for an argument.

"You tripped me up on purpose, Jimmy," he accused, when he could get his breath. "That was nothing but a trick."

"You bet it was a trick, and a mighty good one, too," said Jimmy. "It saved me a ducking, anyway. You'd better get ready to take your medicine."

"Jimmy's right," ruled Bob. "Come on, fellows."

With one accord the other three rushed on the unfortunate Herb, cutting short his vehement protests. Seizing him by the hands and feet, they lugged him out until the water was three feet or so deep, and then, swinging him back and forth a few times like a pendulum, they threw him with a resounding splash into the crest of an incoming breaker.

Herb struggled to the surface in a few seconds, puffing and sputtering.

"Aw, I don't care!" he shouted. "I was going in anyway, so you just saved me the trouble of walking in. So long! I'm going to swim to Boston!"

But he did not get very far on this extended journey, for the surf was so high that day that the boys were content to spend their time diving into the big combers and letting themselves be carried shoreward by the big waves. After they had had enough of this, they went up on the

beach and played ball with a cork surf ball that Bob had brought with him.

"This beats digging away in school, by a long sight," said Jimmy. "Next winter when we're working away like real good boys, we can think of this and wish we were back here."

"Not on your life!" said Joe. "This place is very nifty now, but there's nothing more cold looking than a beach in winter."

"Oh, well, you know what I mean, you big prune," said Jimmy. "We'll wish it were summer and we were back here. It's just as easy to wish for two things as it is for one."

"Who's a big prune?" demanded Joe. "Did you hear that insult, Bob? What shall I do to him?"

"Make him lie down in the sand and roll over," replied Bob, grinning. "You can't let him call you a prune, even if you are one."

"That's what I'll make him do," said Joe, ignoring this last thrust, and he went after Jimmy.

But that individual did not wait his coming, but meekly lay down on the sand and rolled over in most approved fashion.

"Want me to do it again?" he asked Joe. "Anything to make you happy, you know."

"Once is enough," said Joe. "That means that you're sorry and apologize, you know."

"Like fun it does!" said Jimmy. "I just did that because it was less trouble than throwing you into the drink, and, besides, I was afraid of hurting you."

"Oh, I see," said Joe. "But don't let that stop you, Doughnuts. I'll take a chance of getting hurt."

"No, I guess I'll stay here," said Jimmy, gazing placidly up at the blue sky. "Please don't bother me any more. Make him stop bothering me, Bob."

Joe picked up a double handful of heavy wet sand and dropped it squarely on Jimmy's rotund body.

"Let's see you make me stop, Bob," he called, as Jimmy emitted an outraged howl.

Bob was not slow to accept the challenge, and made a flying leap for Joe. The sand flew as they wrestled back and forth, each one striving to throw the other. Finally both went down with a thud, and Bob managed to land on top. Laughing, the two friends scrambled to their feet and dug the sand out of their eyes and ears.

"Thanks, Bob," said Jimmy. "You landed on him almost as hard as that sand landed on me, so we're quits. Before anything else happens to me, I'm going home and get something to eat, so as to have strength to stand it. You fellows may not know it's pretty near dinner time, but I do."

Thus reminded, all the boys suddenly discovered that they were hungry, and they started for home, after taking one more dip to wash the sand off.

"Do you know," said Bob, as they started off, "Mr. Harvey told me the other day that we could borrow his motor boat any time we wanted it and he wasn't going to use it? What do you say if we try and get it to-morrow and take a little cruise?"

This proposal met with instant favor, and that evening the boys planned to leave immediately after breakfast the next morning and try to borrow the motor boat from their new friend at the radio station.

CHAPTER XV

SKIMMING THE WAVES

THE next morning dawned without a cloud in the sky, and the boys were so anxious to get started that they could hardly take breakfast. Crisp brown bacon and fried eggs are not to be lightly ignored, however, and they managed to eat a pretty hearty meal, starting on their expedition immediately afterward.

"We couldn't have picked out a better day if we'd planned for a week ahead of time," observed Joe. "If we can only get that boat now, everything will be fine and dandy."

"I think we'll be able to get it, all right," said Bob. "The only thing that can stop us is the chance that Mr. Harvey will want to use it himself, and even then, likely enough, he'd take us along."

"Well, there's no use worrying about it till we get there," said Jimmy philosophically. "Even if we can't get it, I guess we'll be able to survive the shock."

But when they arrived at the big station they found their misgivings had been groundless. Mr. Harvey seemed very glad to see them, and when they asked him about the motor boat he told them to "go as far as they liked."

"I'm pretty busy here these days, and don't have much time to use it myself," said the radio man. "You boys will be welcome to the use of it to-day, or any other time. It seems a shame for it to be lying idle a day like this."

"Well, if you'll show us where you keep it, we'll see that it gets a little exercise," said Bob.

"Sure thing," said the wireless man. "Come along."

He led the boys a short distance from the station to a narrow inlet that ran back from the ocean. At the head of this inlet was a snug little boathouse which Brandon Harvey unlocked.

"There she is," he said, a note of pride in his voice. "What do you think of her?"

"She's a little beauty!" exclaimed Bob. "That's a mighty nifty boat, Mr. Harvey."

The others were equally unqualified in their praise, because the boat was a beautiful model, twenty-five feet long, with a snug little hunting cabin built up forward. It had a sturdy four cylinder engine, and everything looked to be in perfect order.

Mr. Harvey was evidently pleased by their ap-

preciation of his pet, and pointed out some of the boat's good qualities.

"She's as staunch as they make 'em," he said. "She's a mighty seaworthy and dependable little craft. I think you'll find plenty of gasoline in the tank, so you won't have to worry about anything. I only wish I could go with you."

"I wish you could," said Bob. "But we'll take the best of care of it, and we'll be back before dark. We'll not go far, anyway."

"Well, enjoy yourselves," said Brandon Harvey. "Can you get the engine started all right?"

For answer Bob gave the flywheel a twirl, and the engine started upon the first revolution. Joe took the wheel, while Bob acted as engineer. They backed carefully out of the boathouse, and then shifted into forward speed and proceeded slowly down the creek toward the bay, the engine throttled down until one could almost count the explosions, and yet running sweetly and steadily, without a miss.

"Say, this engine is a bird!" said Bob enthusiastically. "Just make out I wouldn't like to own a boat like this!"

"Who wouldn't?" asked Joe. "It's about the neatest boat of its size I ever saw. I'll bet it can go some if you want it to, too."

"We'll, you know Mr. Harvey told us it could make twenty-five miles an hour, and that's fast

enough to beat anything but a racer," said Herb.

By this time they had reached the mouth of the creek, and the whole expanse of the big bay opened out in front of them. There was just enough breeze to ruffle the surface of the water, upon which the sun played in a million points of flashing light. The cool, exhilarating salt wind filled their lungs, and they shouted and sang with the pure joy of living.

"A life on the ocean wave, a home on the rolling deep!" chanted Jimmy. "Whoever wrote that song knew what he was talking about."

"He'd probably never have written it if he had known you were going to sing it," said Joe.

"You mind your own business and steer the boat," retorted Jimmy. "I've got lots of courage to sing at all with you steering us. You'll likely run us onto a rock or a sandbar before we fairly get started."

"Leave that to me," said Joe. "The nearest sandbar is about half a mile away now—straight down."

"Well, that isn't any too far for safety when you're the pilot," said Jimmy. "Anyway, I'm going up on top of that cabin and have a sun bath. Please don't wreck us until I have a chance to rest up a little, will you? It looks like a long swim to shore."

"Go ahead then, you blooming landlubber,"

grinned Joe. "Leave the running of the ship to a real salty old mariner like me."

With a grunt that might mean anything, Jimmy clambered up on the low cabin, and in a few minutes, lulled by the gentle motion of the boat, was sound asleep. Herb propped himself comfortably against the side of the cabin and gazed dreamily out over the bright expanse of the bay. Bob opened the throttle a little, and the boat picked up speed, her sharp bows cutting through the water in fine style, with a slow rise and fall as they went further from shore and began to feel the ocean swell. White clouds flecked the deep blue sky, and sea gulls wheeled and soared overhead, calling to one another and ever and anon swooping swiftly downward to seize some unfortunate fish that had ventured too near the surface.

The splash and gurgle of the water alongside was beginning to make the boys feel drowsy when they suddenly noticed another boat ahead of them. This craft was holding a course diagonal to their own, so that the two boats were drawing slowly together, although at present they were perhaps a mile apart.

"There are some other people out enjoying themselves," said Bob. "Wonder if they're anybody we know."

"We'll soon be close enough to tell," said Joe.

"By Jiminy!" he exclaimed, a few moments later. "I believe we do know 'em, Bob, worse luck. Don't you recognize that big fellow that's steering?"

Bob shaded his eyes with his hand and gazed steadily for a few seconds.

"Buck Looker!" he exclaimed finally. "And if I'm not much mistaken, his whole gang is with him."

"Yes, I can see Carl Lutz and that little beast, Terry Mooney," said Joe. "And I guess they've recognized us, too. See how they're pointing in this direction?"

The motor boats were drawing closer together, and their occupants could now see each other plainly. Looker and his friends were in a freakish looking craft. It looked as though it might have been a speed boat once, but now wore a shabby and dilapidated air.

CHAPTER XVI

A THANKLESS RESCUE

THE two motor boats by now had drawn close together and were holding parallel courses.

"Hey, you fellows!" yelled Buck Looker. "I suppose you think you've got a fine, fancy boat there, don't you?"

"That's just about what we think, all right," called back Bob. "It looks it, doesn't it?"

"Looks ain't much," said Buck.

"The looks of that tub of yours aren't, anyway," said Herb sarcastically. "A few gallons of paint would make it look more like a real boat."

"Oh, is that so?" said Buck, with a sneer. "Well, let me tell you, this is a fast boat. We can make circles around that thing you've got there."

"Open her up, Buck, and run away from them," urged Lutz. "Show them what speed looks like."

"We'll have to admit you fellows are good at

running away," commented Joe. "But this time it may not be as easy as you think."

"We'll show you!" squeaked Terry Mooney. "Open 'er up, Buck."

His amiable friend did "open 'er up," and, with a terrific noise from the exhaust and a cloud of smoke, their boat darted ahead.

But Bob opened the throttle of the *Sea Bird* a little, and their boat surged forward, apparently without an effort, until they were again abreast of the Looker coterie.

"What's the matter, Buck?" queried Joe, with mock solicitude. "Won't it go any faster to-day?"

Both boats were hitting a pretty speedy clip, and this question seemed to infuriate Buck.

"You bet it can go faster!" he yelled. "Pump some more oil into that engine, Carl."

His friend did as directed, and Buck juggled the spark and throttle controls until his craft attained a speed that would have been sufficient to have left the average cruising motor boat far in the rear. But the *Sea Bird* was built both for long distance cruising and for speed, and the faster Buck's craft went, the faster went the Harvey craft.

Straight out to sea the boats headed, diving into the rollers and throwing showers of spray over their occupants. Crouching low in the

engine cock-pit, Bob nursed the motor lovingly, an oil can in one hand and a bunch of greasy waste in the other. He was mottled with oil and grease, and the perspiration trickled down his face in little rivulets, but he had never been happier in his life. The engine was running like clockwork, and he knew there was plenty of power and speed in reserve if he needed them.

Buck, on the other hand, was fussing and fuming over his engine, trying to make it go a little faster. But it was working up to its limit, and do what he would, he could not coax an extra revolution out of it.

Joe, who was steering the *Sea Bird,* looked back at Bob, a question in his eyes. He yelled something that Bob could not hear above the whistle of the wind and the throb of the engine, but he knew what Joe meant, and nodded his head.

The time had come to show Looker and his friends what speed really was. Bob opened the throttle to the limit. The engine responded instantly, and the *Sea Bird* leapt forward, gathering more speed every second. Leaping from wave to wave, it seemed to be trying to live up to its name, and actually fly. Buck Looker's craft dropped away as though standing still, and there was soon a long strip of swirling white water between the two boats.

All four radio boys laughed and shouted

exultantly, and Jimmy and Herb pounded each other madly on the back in the excess of their joy.

"This is some little through express!" screamed Jimmy into his companion's ear. "Can't she hit it up, though?"

But now Buck Looker and his friends were quite a way astern, and Bob was forced to slow down, as they were plunging into the waves at a dangerous speed. One big wave swept over the boat and left them dripping, and for the first time they realized how high the seas were running. They were now well outside the bay, and a stiff southwest wind had arisen and was kicking up a nasty chop. Bob slowed down to half speed, after which they took the big seas more easily, but they all judged it was high time to start back. In the excitement of the race they had gone much further than they had intended, and Joe made haste to swing the bow around and head back for quieter waters.

"I wonder how Buck is making out," shouted Bob to Joe. "Can you see them yet?"

"Yes, I can see them. But they seem to be having trouble of some sort," replied Joe. "They're rolling around in the trough of the waves, and I can only see them when they come up on top of one."

"If they're in trouble, I suppose we'll have to

help them out," said Bob, and as there could be no question about this, the radio boys directed their course toward their erstwhile competitors.

Buck and his cronies were indeed in a bad plight, for their engine had stalled and they were unable to get it going again. This left them at the mercy of the waves, as they had not even an oar aboard. Their boat had not been designed for rough weather, and now it rolled dangerously broadside on to the waves, threatening at any moment to capsize.

As the radio boys approached the helpless craft Terry and Carl stopped long enough in their frantic bailing to shout wildly for help. Buck was still tinkering with the engine, but without result. Their boat was drifting out to sea, and altogether they were in a sorry plight.

Joe approached the helpless craft cautiously, while Bob throttled the engine down until they had only steerage way.

"You'll have to jump for it!" yelled Joe. "We'll come as close as we can, and then you can jump aboard."

Terry Mooney was the first to make ready to jump. He gave a wild leap, but fell short, and would have fallen into the ocean, had not Herb and Jimmy grasped him as he fell and dragged him aboard. Buck and Carl had better luck, and landed safely on the deck of the *Sea Bird*.

They left their craft none too soon, for one of its seams had started to leak, and it was rapidly filling with water. At first the radio boys thought they might be able to tow the disabled craft in with them, but it soon became apparent that it would not stay afloat long enough for this. It settled lower and lower, and even as the *Sea Bird* picked up speed for the run home the unfortunate craft dived under as an unusually large wave broke over it, filling it with water.

"We got you off just in the nick of time," said Bob. "If we hadn't been around, it looks as though you would have had a long swim home."

"Oh, somebody else would have picked us up if you hadn't," said Buck ungraciously. "This boat isn't the only one at Ocean Point, you know."

"It seems to be the only one around just now," said Joe, which was true enough. There was no other craft in sight, and it would have fared ill with Buck Looker and his cronies had the radio boys not been at hand to aid them.

However, gratitude was not to be expected of such boys as Buck and his friends. They drew off sullenly to the stern of the *Sea Bird,* and as for the radio boys, they wasted no more breath on them. They headed directly for the mouth of the little creek leading to the wireless station, and as they came within the sheltering headlands of the bay the sea became less rough and gradu-

ally lessened in violence as they entered more shallow waters.

As they went out that morning, the radio boys had taken special note of conspicuous landmarks, so that they had little difficulty in locating the inlet. Bob throttled the engine down to a low speed, and they were soon creeping up the quiet waters of the creek that were in striking contrast to the turbulent seas outside.

Mr. Harvey had left the doors of the boathouse open, so the boys nosed the *Sea Bird* carefully into its berth, Herb and Jimmy standing by with fenders to keep it from bumping against the timbers and taking off paint.

Bob had hardly shut off the engine before Buck Looker and Terry and Lutz, without a word of thanks or even saying good-bye, leaped ashore and made off.

"Oh, well, it's good riddance," said Jimmy cheerfully. "I'm sure we don't want them hanging around."

"I suppose they felt sore about losing their boat," said Bob. "But they could hardly blame us for that. It was they who proposed to race."

"And they got all the race they wanted," said Joe. "Isn't this boat a little peacherino, though?"

"It's a wonder," said Bob. "I'd almost be willing to undertake a trip to Europe in it. I'll bet she'd make it all right."

The others agreed with him in this estimate of the *Sea Bird's* prowess, and they discussed her many virtues as they cleaned up the decks and made everything neat and shipshape. This accomplished, they proceeded to the wireless station, where they met their friend just coming off duty.

"Well, how did you enjoy yourselves?" he questioned. "Did the boat act up all right?"

"I should say she did!" said Bob, and gave him a brief account of the day's happenings.

"Shucks!" exclaimed Harvey, when he had finished. "Those boys must be poison mean not to have even thanked you for picking them up. I didn't think anybody could be quite that ungrateful."

"You haven't had the experience with them that we have," said Bob. "But we enjoyed the trip immensely, anyway, and certainly want to thank you for lending us your boat."

"Oh, that's all right," said Harvey heartily. "Any time you want it again, just say so. When are you coming to visit me at the station again?"

"Why, we've been meaning to get there for several days past," said Bob. "If you're going to be there to-morrow, we can drop in then. How about it, fellows?" turning to his friends.

"Sure thing," said they all, and so it was agreed. Mr. Harvey had been walking with them in the direction of the bungalow colony while the

foregoing conversation took place, but now his path branched off from theirs, and he said good-night after reminding them of their promise to visit him the following day.

The boys continued on home, discussing the events of the day. They arrived just a little before the evening meal was served, and they fell on the repast like a pack of young wolves, as they had taken no lunch with them, not expecting to be out so late.

"My goodness!" exclaimed Mrs. Fennington, when they had at last finished. "I'm glad you boys don't go motor boating every day. You'd soon eat us out of house and home if you did."

"If we owned the *Sea Bird,* Mother, we wouldn't need any home," said Herb. "We'd live aboard, wouldn't we, fellows?"

The others laughingly agreed to this.

"There's a dandy concert on to-night," remarked Jimmy. "I saw the program in the newspaper. Some colored singers from a college down South."

"Suits me," returned Joe, and a little later all the boys and a number of the others were listening in. The musical numbers were well rendered, and they listened with delight.

"Hark!" cried Bob, when they were waiting for another announcement by wireless. "There

goes a regular code message. Wish we could read it."

"I can make out some of it," answered Joe. W—I—K—no, I guess that was L. Maybe it was WILL. Might be 'will arrive,' or something like that," and he sighed. "Gee, if we only could get onto it!"

"We will some day," answered Bob.

"You bet!"

CHAPTER XVII

AN OCEAN BUCKBOARD

ONE morning soon after their arrival at Ocean Point the boys went down to the beach equipped with a novelty that they had often heard about, but had never seen until the night before.

It had been Jimmy's birthday, and his father had made and sent him a gayly decorated surfboard to celebrate the occasion. When he first saw it Jimmy was at a loss to know what kind of strange present he had received, but when he showed it to the other radio boys, Bob quickly told him what it was for.

"I saw a moving picture once that showed the beach at Tampa," said Bob. "It looked as though almost everybody had one of those surfboards, as they are called."

"Yes, but what do you do with the thing? That's what I want to know," complained Jimmy. "It looks like something that would be fine for scaring the birds away from the garden, but, aside from that, I can't think of much use for it."

"Why, you just flop down on it against the crest of a surf wave, and the wave does the rest," explained Bob. "At least, that's the way it looked in the pictures. The wave carries you and the surfboard along in front of it, and believe me, you travel some, too."

"Well, that listens all right," said Jimmy dubiously. "But since you know all about it, it's up to you to try it out, Bob."

"Surest thing you know, I'll try it out," returned Bob. "I suppose we'll get plenty of duckings while we're learning how, but we'll be out for a swim, anyway, so what's the difference?"

On the morning following they sallied out bright and early, eager to experiment with this latest means of amusement.

"I only hope there's a good surf running," said Bob. "I suppose now that we want it to be a little rough, the sea will be as smooth as a mill pond."

"Well, I hope not," said Jimmy. "I've never seen a mill pond myself, but according to all the dope they must be about the stillest things that ever happened. I wonder if there is such a thing as a rough mill pond. If there is, I'd be willing to go a long way to see it."

"Oh, there are lots of things like that," said Herb, laughing. "For instance, whoever saw an aspen leaf that didn't quiver?"

"Yes, or a terrier that didn't shake a rat," said Joe.

"Or a pirate that didn't swagger," said Jimmy.

"Or even a pancake that wasn't flat," added Bob.

"Good night!" laughed Herb. "What have I started here, anyway? We'll all be candidates for the lunatic asylum if we keep this up very long."

"Oh, well, after being around with you so long, we'd feel right at home," said Jimmy sarcastically.

"I haven't any doubt *you'd* feel at home, all right," retorted Herb. "I'll bet you'd feel at home right away."

"You bet I would," said Jimmy. "All I'd have to do would be to tell them some of your bum jokes, and they'd elect me a charter member right off the bat."

"I think Jimmy would show up even better as a member of the Pie-eater's Union," said Joe. "He has such a special gift in that direction that he'd soon be champion of the whole outfit."

"Well, it's something to be a champion of anything in these days of competition in sports," said Jimmy. "But here we are, Bob, and here's *your* chance to demonstrate how to become a champion surfboard artist."

"All right, I'm game," said Bob. "Hand over that instrument of torture, and I'll be the goat

and give you fellows a good chance to laugh at me."

The surfboard was about the shape and size of a small ironing board, although much lighter. Equipped with this device, Bob waded into the surf, holding the surfboard over his head until he got into water as deep as his shoulders. There was a fairly high surf running, in spite of his pessimistic prophecy to the contrary. Bob waited until an unusually high breaker came curling in, and then launched himself and the surfboard against the green wall of water.

More by good luck than anything else he caught it at the right angle, and went whirling toward the shore at breath-taking speed. For perhaps a hundred feet he held his position, but then tilted to one side, and in a moment he and the surfboard disappeared in a smother of foam and spray. Tumbled over and over, he finally got to his feet, after the force of the wave had spent itself, and waded into shore, puffing and blowing.

"I got a good start, anyway," he panted. "I guess it takes practice to keep your balance and come all the way in, but it's a great sensation. I'm going to try it again." Suiting the action to the word, Bob waded valiantly in again. After several attempts he finally caught a big wave just right, and by frantic balancing rode all the way in to shallow water.

"There you are!" exclaimed Bob triumphantly. "Say, when we once get on to this, it ought to be barrels of fun. Who's going to be the next one to try it?"

"I'll take a whirl at it," said Joe. "It looked easy enough the way you rode in the last time."

"Sure it's easy," grinned Bob, shaking the water out of his ears. "Go to it, Joe. I'll stand by to rescue you if you need it."

Joe made several attempts, and received some rough handling from some big breakers before he finally contrived to make a fairly successful trip.

"Wow!" he exclaimed, scrambling to shore and throwing the surfboard at Jimmy. "It's fun if you have luck, but I thought I was going to drink the whole Atlantic Ocean once or twice. You try it, Jimmy. It's your board, anyway."

"Yes, I know it's my board," said Jimmy. "Don't you want to try it next, Herb?"

"Oh, I wouldn't think of using it before you," said Herb. "I want to have the fun of seeing you get drowned before me, Doughnuts."

"Well, I suppose I shouldn't refuse to give you that pleasure, so here goes," returned Jimmy, and he waded manfully into the surf, the board poised above his head.

He made a lunge at the first big breaker that came along, but instead of planting the board at an angle, he slapped it against the wave in a ver-

tical position, and the next second he was underneath the board and was being ignominiously rolled and tumbled along the sandy bottom. When the wave finally left him, he staggered to his feet and found the treacherous surfboard floating within a yard of him.

His companions, seeing him safe, laughed heartily at his woebegone and bedraggled appearance.

"It's great sport, isn't it, Jimmy?" chaffed Bob.

"Sure it is, when you do it right," sputtered Jimmy. "I'm going to try it again, if it kills me," and he seized the recalcitrant surfboard and waded doggedly out again. This time his persistence met with a better reward, for, warned by his previous experience, he placed the board flatter this time, and rode in almost to shore before getting upset.

"That's enough for a starter," he gasped. "There certainly is plenty of excitement to it. Go ahead and try it, Herb, with my blessing."

Herb did not seem any too anxious to follow his friend's bidding, but nevertheless he took the board, and after several attempts got the hang of it well enough to get enthusiastic over it.

"It's simply great when you get started right!" he exclaimed. "We'll each have to get one, and we'll have more sport than a little with them."

For the rest of the morning the boys took turns with the contrivance, and by the time they stopped

to go home for lunch had gotten quite expert. That afternoon they got their tools, and by evening had fashioned three duplicates of Jimmy's board. On following days they used them to good effect, and before they left Ocean Point that summer they were all adepts at this new form of sport.

CHAPTER XVIII

IN THE WIRELESS ROOM

"Say, Bob," said Joe, as the four radio boys were walking briskly in the direction of the wireless station the following morning, "we must get Mr. Harvey to give us lessons in sending. That must be half the fun of radiophony, and we might as well do all there is to do. What do you say?"

"I think you're dead right," said Bob heartily. "We'll speak to him about it to-day, and I guess he'll show us how all right. In fact, he offered to do that very thing the first time we were there, if you remember."

"I know he did," said Joe. "And I'm going to remind him of it as soon as I get a chance."

The chance was not long in coming, for that was one of the first things Mr. Harvey spoke of after their arrival at the station.

"You fellows ought to practice up on receiving and sending," he said. "You can't really claim to be full-fledged radio fans until you can do that."

"That's just what we were speaking of on our way here," said Bob. "If it wouldn't be asking too much of you, we'd like nothing better than to have you show us how."

"Well, of course, it doesn't take very long to learn the international code, and after that it's chiefly a matter of practice," said the radio man. "I have a practice sending set here now, and if you like I'll give you your first lesson."

The boys were only too glad to take advantage of this friendly offer. Harvey had a simple telegraph key, connected up to a buzzer and a couple of dry cells. The buzzer was tuned to give a sound very much like an actual buzz in an earphone. In addition he had a metal plate on which all the letters of the alphabet were represented by raised surfaces, a short surface for a dot, and a long one for a dash. The low spaces in between were insulated with enamel. In this way, if one wire was attached to the brass plate and the other brushed over the raised contact surfaces, each letter would be reproduced in the buzzer with the proper dots and dashes.

The boys found this device a big help, as they could memorize the proper dots and dashes for each letter, and then by moving the wire along the plate could hear the letter in the buzzer just as it should sound.

"But with this thing, it seems to me you don't

need to take the trouble to memorize the code," said Herb. "Why, I could send a message with it right now."

"You could, but it would be a mighty slow one," replied Brandon Harvey. "That thing is useful to a beginner, but it wouldn't work out very well for actual sending. It's too clumsy."

"Yes, I suppose that's so," admitted Herb.

"You fellows can take that along with you when you go," said the radio man. "You can dope out the code from that, but you'll need a key to practice with, too. If you like, I'll lend you this whole practice set until you get a chance to buy one yourselves."

"You bet we'll take it, and many thanks!" exclaimed Bob. "We should have brought something of the kind down with us, but we didn't, so your set will be just the thing for us."

"It's been some time since I've had any use for it," said Harvey. "But I came across it the other day, and it occurred to me that maybe you fellows could use it, as you told me the first time you were here that you intended to take up sending."

"It was mighty nice of you to think of us," said Joe, his face beaming.

"Oh, well, we radio fans have to stick together," returned Harvey, with a smile. "There's some extra head sets lying around here somewhere, and, if you like, you can listen in on some

of the messages coming in. Things were pretty lively just before you fellows came in."

The boys lost no time in taking advantage of this offer, and were soon absorbed in listening to the reports of shipping, weather conditions, and occasional snatches of conversation that came drifting in over the antenna. Harvey's pencil was busy as he jotted down reports and memoranda. The boys felt that they were in intimate touch with the whole wide world, and the morning flew by so fast that they were all astonished when Harvey announced that it was lunch time.

"Say, but you certainly have an interesting job, Mr. Harvey," said Bob. "I only wish I were a regular radio man, too."

"So do I," said Joe. "It's about the most fascinating work I can think of."

"You might not like it so much if you were doing it every day," said Brandon Harvey. "But it's a big field, and getting bigger every day, so maybe a few years from now you may join the brotherhood. If you ever do, why, all the experience you're getting now will come in mighty handy."

"Yes, but I know something else that might come in pretty handy, too," put in Jimmy, "and that's a little lunch. I think we'd better make tracks toward home mighty soon."

"Nothing doing!" protested Harvey. "You're going to stay here and have lunch with me. I can't give you much, but it will probably enable you to totter along until this evening, anyway."

The boys protested against putting the radio man to so much trouble, but he would not take no for an answer, so they allowed themselves to be persuaded, gladly enough, in truth.

It did not take the radio man long to prepare a simple but nourishing meal, all the cooking being done on an electric stove he had rigged up himself. While they ate they talked, and Brandon Harvey told them something about himself. It seemed that he had formerly been an accountant, having taken up radio as a hobby at first, but then, finding himself deeply interested in it, had resolved to make it his life work.

"I still do a little at my old trade, though," Harvey told them. "I'm treasurer of the Ocean Point Building and Loan Association, and that sometimes keeps me pretty busy in the evenings after I'm off duty here."

"I should think it would," commented Bob. "What do you have to do, anyway?"

"Oh, I keep the books straightened out, and occasionally I make collections of cash," answered Harvey. "I'll probably get knocked on the head sometime when I'm carrying the money around with me. I always feel rather uneasy when I

have any large sum about, there seem to be so many holdups these days."

"Have you a good safe place here to keep the money?" asked Joe.

"Yes, fairly safe," responded Harvey. "I put it in the Company's safe here, and I don't suppose anybody would bother about it. But just the same, I don't leave it here unless I simply haven't had time to deposit it in the bank."

The talk drifted into other channels, and the boys thought little more of what he had told them at that time. After lunch they practiced sending with the buzzer set, and got so that they could recognize some of the letters when they were sent very slowly.

"Huh," said Jimmy, elated at his success in making out two letters in succession, "I'll be sending and receiving thirty words a minute in a little while."

"How little?" grinned Bob.

"Just about a hundred years or so," put in Herb, before Jimmy could answer.

"Hundred nothing!" said Jimmy indignantly. "Don't think because it will take you that long that I'll be just as slow. I'm going to show you some speed."

"Go on!" chaffed Herb. "Who ever heard of anybody as fat as you showing speed? You don't know what that word means."

"Just the same, I haven't seen you read *any* words yet," retorted Jimmy. "About the only one you know is E, and that's because it's only one dot."

"Well, I'll know the whole blamed thing pretty soon," said Herb. "You see if I don't."

"I've no doubt you'll all be experts in a little while," laughed Harvey. " 'Practice makes perfect' in that as in most other things."

The boys remained at the big station until late in the afternoon, and then, with many thanks to their friend for his assistance, they started back home.

"Mr. Harvey is one of the finest men I've ever met," said Bob, as they walked briskly along. "He and his cousin are a good deal alike. They both know a lot, and they're both willing to help other people understand the things they're interested in."

"Yes, we couldn't have made a better friend," said Joe. "I only hope we have the chance to do something for him some day. I feel as though I'd learned a lot about radio just since we came to Ocean Point."

Jimmy and Herb warmly indorsed this statement, and had the radio man been able to hear them, he would probably have felt fully repaid for his efforts in their behalf.

He, for his part, felt indebted to the boys.

Their eager enthusiasm had stirred him deeply, and their laughter and good fellowship had come like a fresh breeze into the routine of his daily life. He was still young enough himself to feel in perfect touch with them, and he welcomed their coming and regretted their departure.

He sat for some time musing, with a smile on his lips after they had left him. Then the conversation he had with them about the money he held in trust recurred to him, and he stepped over to the safe, took out the funds and counted them.

He gave a whistle of surprise when he realized how much had accumulated.

"Too much to have on hand at one time," he said to himself, as he closed the safe. "I must get that over to the bank!"

CHAPTER XIX

DANCING TO RADIO

"THAT talk with Mr. Harvey has certainly made me ambitious," remarked Bob that evening, as the boys were tinkering with their radio set.

"Who was that poet who said:

'I charge thee, fling away ambition,
'Twas through ambition that the angels fell, "

quoted Joe.

"Pretty good dope, too, if you ask me," said Jimmy.

"I might have expected that that would hit you pretty hard," replied Bob, with what was meant to be withering sarcasm, though Jimmy did not "bat an eyelash." "But it doesn't apply to me at all. In the first place, I'm not an angel——"

"How you surprise us," murmured Herb.

"So that what happened to angels needn't necessarily happen to me," continued Bob.

"I prithee, gentle stranger, in what direction doth thy ambition lead?" asked Herb, at the same time looking around at the others and tapping his forehead significantly.

"In the direction of that loop aerial that we were talking about before we left Clintonia," answered Bob. "You know Mr. Brandon said it was good, and you remember what he told us about the way the British used it to trap the German fleet. That's been running in my head ever since. What do you say to rigging one up and seeing just what it will do? If we find it better than our present aerial, we'll use it altogether."

"Well, I'm ready to try anything once," chimed in Joe.

"I suppose here's where Jimmy gets busy in making a frame for it?" suggested Jimmy, in an aggrieved tone.

"Likely enough," replied Bob heartlessly. "You need a little work to get some of that fat off of you, anyway. But after you get the frame and the pivot made——"

"Oh, yes, the pivot, too!" said Jimmy. "All right, go ahead. Be sure you don't overlook anything."

"The rest of us will pitch in and wind the wire," finished Bob.

Jimmy heaved a long sigh, and to revive his drooping spirits, produced a pound box of assorted chocolates that an aunt in Clintonia had sent him.

But Jimmy chose an unfortunate moment to exhibit these delicacies, for at that moment Herb's sisters, Amy and Agnes, entered the room and immediately espied the box of tempting confections.

"Oh, isn't that nice!" exclaimed Agnes. "Did you bring these just for Amy and me, Jimmy?"

"Well—er—not exactly," stammered Jimmy. "I was figuring that we'd all have a hack at them, I guess."

"But I thought boys didn't care for chocolate creams," said Agnes. "They're just for girls, aren't they?"

Jimmy fidgeted uncomfortably, but before he could think of anything to say, Herb came to his rescue.

"You'd better act nicely or you won't get any," he said with true brotherly frankness. "If you're real good we may let you have one or two, though, just as a special favor."

"I thought those candies belonged to Jimmy," said Amy quickly. "I don't see what you've got to say about them, anyway, Herbert darling."

"I guess we'd better compromise," suggested

Bob, laughing. "Suppose we set them on the center table, and then we can all help ourselves. That's fair enough, isn't it?"

"Yes it is not!" exclaimed Herb. "The girls'll eat them all while we boys are fooling with the radio. But I suppose we might as well let them have the things that way as any other. They'll get them some way, you can bet on that."

"You're just mad because you can't have them all yourself," said Agnes serenely, as she nibbled at a chocolate. "You boys go ahead with your radio. We'll take care of the candies."

"What did I tell you?" said Herb disdainfully. "That's about all girls think of anyway—eating candy."

"Oh, go on," said Amy. "We don't like them a bit better than you boys do, only you won't admit it."

"They couldn't like them much better than Jimmy does, that's a fact," said Joe.

"Aw, forget it," said Jimmy. "We're all in the same boat when it comes to that. Let's get busy with the radio."

The candy incident was soon forgotten in the interest of the concert they heard that evening. There was an unusually fine program, one of the features of which was a lecture on radiophony. The boys listened attentively to this, and got some valuable information in regard to the latest de-

velopments of the science. After this was over there were a number of band and orchestral selections. The girls listened to these, too, and when they were over, Agnes made a suggestion.

"Since your set works so well, why couldn't we give a dance?" she asked. "You can always find a station that is sending out dance music, can't you?"

"Say, that's a pretty good idea!" exclaimed Bob. "There are plenty of other young people in the bungalows around here, and I don't think we'd have any trouble in getting a good crowd."

"Fine and dandy!" exclaimed Joe. "By that time we may have our loop aerial finished, and it will be a good chance to try it out."

"Suits me all right, provided I can work the set and don't have to dance," stipulated Jimmy. "If I try to dance these hot nights, I'll just melt away like a snowball in front of the fire."

"Maybe when some of the pretty girls around here come in you'll change your mind," said Agnes.

"Well, we ought to have lots of fun, anyway," said Bob. "We'll leave it to the girls to give the invitations, and we'll guarantee to furnish all the music you want. We'll make Ocean Point sit up and take notice."

"You've got to ask some of the younger girls, too, and not just your own set," put in Herb

quickly, for his sisters were both older than he was by a few years.

"Oh, of course," promised Agnes. "This will be a free for all."

The rest of the evening they spent in making plans for the forthcoming party, and the next morning the boys set to work like beavers on the loop aerial. They hardly paused for meals, and before the day was over they had it completely made and set up. The girls, as well as the boys, were greatly interested in the first test, and they all waited breathlessly for the sounds that should issue from the throat of the horn. It was not long before the boys picked up a concert that was going on in Boston, and the effect was startling. After they had tuned out all interferences the music came in sweet and full and in such volume that they even had to tone it down a little. Mrs. Fennington, seated on the porch, could hear everything distinctly, and applauded each number.

The evening of the party arrived in due course, and the guests all arrived early, many of them curious and somewhat sceptical about hearing dance music by radio. Agnes and Amy had told them about the loud-speaking apparatus, and they were all prepared for something novel.

But it is safe to say that few of them were prepared for as pleasant an evening as this one

turned out to be. Receiving conditions had never been better, and the boys had no trouble in picking up fox trots, waltzes, or any other style of dance music. Between the dances they got some more serious music that happened to be "in the air" from some other station than that sending out the dance music, and their entire apparatus worked like a charm all through the evening.

The radio boys did not spend all their time over the radio set, either. They found plenty of opportunity to dance and laugh with the many pretty girls who had been invited, and everybody concerned enjoyed the evening hugely. Mrs. Fennington had provided plenty of ice-cream, cake, and lemonade, articles which did not lack appreciation among the youthful company.

When the party finally broke up all who had been present expressed themselves as having had a wonderful evening.

"I think we just had a perfectly spiffy time," said Agnes, somewhat slangily but with undoubted feeling. "I think I'll be as crazy about radio as you boys are, pretty soon."

"It's about time," commented Herb. "You never cared so much about it before, but now that you can dance to it, you think it's fine."

"Well, she's right," said Amy, coming to the defense of her sister. "What is there that's better than dancing?"

"Oh, the world's full of better things," declared Herb. "But there's no use my trying to tell you what they are, I suppose."

"You can't tell 'em anything," chuckled Jimmy. "They won't believe you if you do."

"If we believed all the fairy stories Herb has told us, we'd have to be pretty silly," said Agnes.

"Well, you're both pretty, anyway," said Joe gallantly.

"Thank you," said Agnes. "That's more than Herb would say in a hundred years."

"I heard him saying that to one of the girls he was dancing with this evening," said Bob slyly. "How about it, Herb?"

"Aw, you didn't anything of the kind," declared Herb, but he betrayed himself by blushing furiously.

"Poor old Herb," said Joe. "He must be pretty hard hit. What do you think, Bob?"

"Looks that way to me," answered Bob. "He sounded as though he meant it, anyway."

"Well, so I did," said Herb. "If she hadn't been pretty, I shouldn't have been dancing with her."

"Gracious! how my young brother hates himself," exclaimed Agnes.

"How can I hate myself, when all the girls fall for me so?" asked Herb brazenly.

"Oh, you're a hopeless kid," said Agnes, laugh-

ing. "Come, Amy, I'm going to bed," and the two girls said good-night and left the room.

"I guess it's about time we all turned in," said Bob. "We've had a mighty fine evening, though, and I'm proud of the way our outfit showed up."

The others felt the same way. They were just about to disperse when Mrs. Fennington entered the room.

"This evening has been so successful," she said, "that I was wondering if we couldn't give a concert in aid of the new sanitarium that is being built here. They are greatly in need of money to carry the project on, and I'm sure you would be doing a wonderful thing if you could help it along."

The boys were for the project at once, and said so.

"But do you think people will pay to hear a radio concert?" asked Herbert.

"Of course they will!" exclaimed his mother. "They pay to hear every other kind of a concert, don't they? And when they know it is to aid the new sanitarium they will be all the more anxious to come."

"I'm sure we'll do our share," said Bob. "We'll be glad to give the concert, and if people shouldn't come to it, that wouldn't be our fault."

"That will be excellent then," said Mrs. Fennington. "I'll speak to some of the other ladies

about it, and we'll set a date and make all the arrangements."

"That plan of mother's reminds me of something I was reading about the other day," said Herb, after Mrs. Fennington had left the room. "It was in connection with that drive they were making for the disabled war veterans. Do you remember the 'flying parson' that won the transcontinental air race a couple of years ago? Well, he has a radio attached to his airplane and he arranged to have an opera singer give a concert over it. She sat in the plane and sang, and her voice was heard over a radius of five hundred miles. Then the parson gave a short, red-hot talk in behalf of the soldiers, and thousands of people heard about the drive that wouldn't have known of it otherwise. They say that money poured into headquarters by mail during the next few days."

"Good stuff!" exclaimed Bob. "Our work will be on a smaller scale, but the spirit will be there just the same, and I bet our old radio will rake in a heap of coin for the sanitarium."

CHAPTER XX

THE RADIO CONCERT

"WHEN do we give the concert, Herb?" asked Bob at breakfast the next morning.

"Mother isn't quite sure yet," replied Herb to Bob's question. "Not until she consults with some of the others, anyway. But she thinks that a week from to-night will be all right. Guess one night's the same as another as far as we are concerned."

As a matter of fact, the projected concert was scheduled several days sooner than Herb had predicted, being set for the ensuing Saturday night, so as to get as many of the week-end visitors as possible. Tickets to the affair sold well, and from the first it became evident that there would be a large attendance. People were only too glad to come, both for the sake of hearing good music and to know that they were contributing to a worthy charity. The boys, as the volume of sales increased, realized that it was up to them to see that the visitors should have the worth of

their money and they went over the set with a "fine-tooth comb," to use Herb's expression, in order to make sure that every part of it was in fine working order.

"We'll have to test everything out pretty thoroughly," remarked Bob, that Saturday morning. "We'd never hear the last of it if anything went wrong to-night."

"You bet!" said Joe. "We've got to have everything in apple-pie order."

The audience began to arrive early. A large space had been roped off in front of the central bungalow and furnished with rows of campchairs. The boys had set up the loud-speaking horn on a small table on the porch, running leads from it to their apparatus in the living room. This enabled them to operate the set out of sight of the audience.

By eight o'clock almost everybody was in his place, waiting expectantly, and in some cases somewhat sceptically, for the music to begin.

But they had not long to wait. Inside the bungalow the boys, excited and tense, heard the familiar voice of the announcer at WJZ, the big Newark broadcasting station. While he was speaking the boys had the horn outside disconnected, but with their head phones they tuned until the announcer's voice was distinct and clear and all other sounds had been tuned out. Then,

as the announcer ceased speaking, and in the brief pause that ensued before the first selection on the program started, the boys connected in the loud-speaker on the porch.

The concert commenced. Violin solos, vocal selections, and orchestral numbers followed each other in quick succession, every note and shade of tone being reproduced faithfully by the radio boys' set.

The audience sat in absorbed silence, listening spellbound to this miracle of modern science. At intervals they could not resist applauding, although the artists producing the music were many miles away. When the concert was over at last there was a regular storm of handclapping and calls for the boys, who at length had to appear on the porch, looking, it must be confessed, as though they would rather have been almost anywhere else.

Cries of "Speech! Speech!" came from the audience, and at last Bob stepped forward.

"We're mighty glad if all you folks enjoyed the concert," he said. "We boys are all very much interested in radio, and we want to have everybody know what it is like. Maybe before the sanitarium gets finished you'll have to listen to another concert," he added, with a grin.

Cries of "we hope so" and "make it soon" came from the audience, which then dispersed with

many expressions of commendation for the evening's entertainment.

When the receipts for the evening were counted it was found that they had taken in over four hundred dollars, which was soon turned over to the trustees of the sanitarium.

The concert was the chief topic of conversation in the neighborhood for the next few days, and the radio boys were deluged with requests for information concerning radio and radio equipment. They were somewhat surprised at the furor caused by their concert, but that was probably the first time that most of those present had ever heard radio music or had reason to give more than passing thought to the subject.

But the boys had other interests in addition to radiophony to absorb their attention. At last word had come that the tourists had started home, and the boys were excited at the thought of soon seeing their parents and Rose again. They had written that they would come from Norfolk to Boston on the steamer *Horolusa,* a combination freight and passenger ship.

"Say!" exclaimed Bob, when he read this, "wouldn't it be great if they'd send us a wireless message from their ship when they pass Ocean Point on the way to Boston?"

"You bet it would," said Joe. "Do you suppose they'll think of it?"

"They'll probably be passing here some time to-morrow," said Jimmy; "so it will be up to us to keep close to the radio outfit in case they do send a message. Probably they'll never think of it, though."

"I hope they have good weather for the trip," said Bob. "It doesn't look very favorable just now."

"It doesn't, for a fact," agreed Joe. "It's been cloudy and muggy for the last two days, and it's worse than ever to-day. But it probably won't amount to anything. There isn't apt to be a bad storm at this time of year."

But the weather failed to justify Joe's optimism. As the day wore on the cloudiness increased, and toward evening a breeze sprang up that kept freshening until it had attained the proportions of a gale. All that night it blew with increasing violence, and the next day, when the boys went down to look at the ocean, they were alarmed at the size and fury of the surf. Toward evening their anxiety increased, as no word had come from the *Horolusa,* although they had spent the afternoon at their radio set. They overheard messages of distress from other vessels, however, and knew that the storm was creating havoc along the coast. Night came on early, with the gale still blowing with unabated fury, and after supper Bob proposed that they go to

the big radio station and see if there was any news there of the *Horolusa.*

"That will be fine," said Jimmy. "If they haven't received any news of the ship there, we can be pretty sure that she is all right, because they would have been sure to get any distress message if it had been sent out."

The boys made a hasty end of their meal, and then started through the storm and darkness for the wireless station. It was raining in torrents that were driven before the gale and penetrated the thickest clothing. The only light the boys had came from an occasional jagged flash of lightning, and they kept to the path more by instinct than knowledge of its direction. But, with heads lowered to the storm, they plodded doggedly on, their minds filled with forebodings of disaster to their loved ones. The terrible roar of the breakers on the beach made them shudder with dread.

Suddenly a tremendous flash of lightning split the sky, and in the fraction of a second that the vivid glare endured they saw a man coming toward them whom Bob and Joe recognized at once. It was Dan Cassey, the scoundrel who had tried to cheat Nellie Berwick in the matter of the mortgage on her home.

More from instinct than anything else, the radio boys sought to block the man's path,

guessing that he was probably on some evil errand and remembering the warning that Miss Berwick had given them. Cassey struck out at random, and one lucky blow caught Joe unawares and knocked him down. The other boys sprang at Cassey, but in the darkness he managed to elude them and took to his heels.

It was hopeless to attempt to find the rascal in the pitch blackness, and after running a few steps the boys realized this and returned to help their comrade.

The latter had gotten to his feet and was fuming with anger, and it was all that his friends could do to dissuade him from rushing off through the darkness in quest of his assailant.

"But he was headed for the village probably," expostulated Joe. "We'll probably find him there if we get there before he has time to light out."

"Maybe. But it's more important just now to get to the wireless station and find out if there's any news of the *Horolusa,*" said Bob. "If we find out that she's all right, we can get after Cassey later."

"That's good dope," said Jimmy. "The sight of that rascal has made me feel more scared than ever for the folks. He's a hoodoo, a raven, a sign of bad luck. I'm not superstitious, but meeting him has given me the creeps."

The boys resumed their interrupted journey, and before long could see the lights of the radio station shining through the rain.

"Now, if we can only find out that the steamer is safe!" sighed Bob.

"If we only do!" came from Joe. "It would be terrible if anything went wrong in this awful storm."

The boys increased their pace, and were soon mounting the steps of the porch. To their surprise, the door was wide open, and almost by instinct they felt that something was wrong. Their suspicions were confirmed the next moment, for as they entered the house the first object they saw was their friend, Brandon Harvey, stretched unconscious on the floor with blood trickling from a wound on his head. The little safe of which he had spoken the last time the boys were there stood wide open, and the cash drawer lay empty on the floor.

CHAPTER XXI

A DASTARDLY ATTACK

WITH horror-struck faces the radio boys hastened to examine and aid their friend.

"He isn't dead," said Bob, as he felt the wounded man's heart beat. "Somebody's given him a terrible blow, though. Let's lift him over to that couch, and I'll get him a drink of water and see if we can't bring him around."

This was quickly done, and the boys chafed his wrists and did everything they could think of to restore him to consciousness. At last their efforts were rewarded, for Brandon Harvey's eyelids flickered, and a spot of color came into his cheeks. As his eyes opened recognition came into them, and he made a feeble effort to rise, but sank back on the couch with a groan.

"Who hit you?" asked Bob. "Do you remember what happened?"

"I was at the table, taking a message," panted Harvey, in a voice little above a whisper. "I remember hearing a footstep behind me, but before I could turn around somebody struck me on

the head, and I knew nothing more until I came to and found you boys here. Is the safe all right?" he exclaimed suddenly, as a terrible thought crossed his mind.

"I'm afraid that whoever hit you robbed the safe, too," replied Bob. "It's empty now, anyway. The door of it was open when we came in."

"Good Heaven!" exclaimed Harvey, and would have leaped to his feet had the boys not restrained him. "Why, there was over three thousand dollars in that safe! I had been meaning to go to the bank, but the weather was so bad that I let it slide. I can't imagine who the thief could have been."

The same thought occurred to all the boys at once, and was voiced by Bob.

"I'll bet any money I know who the thief was!" he exclaimed. "It must have been that low-down crook, Dan Cassey. He was hurrying away from here when he bumped into us, fellows."

"That's about the size of it!" Joe ejaculated. "And to think that we let him get away from us!"

"Dan Cassey?" queried the wireless man. "Why, that's the same man my cousin was telling me about; the one you fellows had trouble with last spring. Are you sure this was the same one?"

"No doubt of it," declared Bob. "We had a scrimmage with him not half an hour ago, but in the darkness he managed to get away from us. If we had had any idea that he had attacked and robbed you this way, though, we'd have gone after him."

"But we can't be sure that he was the thief, anyway," said Brandon Harvey. "How did you boys happen to be coming here?"

"Before we talk any more I'm going to fix your head up," said Bob. "You've had a pretty bad crack there, and you'd better stay as quiet as you can. After I've fixed you up, I'll tell you what we came for."

The wireless station was equipped with a complete medical outfit. Bob sponged the ugly looking gash, then applied iodine and bandaged the wound as well as he could.

"There!" he exclaimed. "That isn't very fancy, but it's a whole lot better than nothing. How do you feel now?"

"Pretty much all in," Harvey confessed, essaying a smile. "I don't mind the rap on the head as much as I do the loss of the money. I'll have to make it good, and that will take some while out of a wireless operator's pay."

"Don't worry about that money," said Joe. "It isn't as though you didn't know who took it. There isn't a doubt in any of our minds but

Cassey is the guilty party. If we can locate him, we'll either make him give it back or else wish he had."

"Well, I only hope so," said Harvey doubtfully. "But you haven't told me yet what lucky accident brought you to my assistance."

"Why, we wanted to find out if there was any news of the *Horolusa,* the steamer that our folks are coming home on," explained Bob. "We've been listening at our set all the afternoon for word from her, but haven't heard anything. We thought that perhaps you had caught something that got past us."

"No, I haven't heard a thing from that particular ship," said Harvey, shaking his head. "There are plenty of others, though, having a hard time of it. This is the worst storm on record for this time of year. I don't remember—ah! there's a distress signal now. I'll have to answer it," and he attempted to get to his feet, but fell back on the couch with a face as white as chalk.

The boys looked at each other in dismay, for while they had been practicing sending and receiving in the international code, they hardly felt competent to take an important message like this. But after a second's hesitation, Bob jumped to the big table.

"I've got to try, anyhow," he muttered grimly.

He snatched the head phones and fastened them over his ears. At first he was so excited that he could make nothing of the jumble of buzzings in the receiver that sounded like a gigantic swarm of hornets. But in a few seconds he began to catch words here and there, and, seizing a pencil, he began feverishly jotting them down.

"Steamer *Horolusa,*" he wrote. "Have struck derelict—sinking—help—quick—are about five miles—Barnegat shoals."

Bob reached for the sending key, while the other boys, their faces white, read the message that he had just written down.

Outside the wind roared and howled, the rain dashed against the windows in sheets, and, although they were quite a way from the beach, the boys could hear above everything else the angry roar of the breakers. They could envision the ill-fated vessel fighting a losing battle with the elements, and their hearts stood still as they thought of the terrible peril in which their dear ones stood.

Bob manipulated the sending key slowly and no doubt made more than one mistake, but nevertheless succeeded in making himself understood by the operator on board the *Horolusa.*

"Message received at Station YS," he sent. "Will relay to all ships. How are things with you now?"

"Lifeboats smashed as soon as put overboard," came back the answer. "Only chance is to be picked up by other vessel. For God's sake, do your best."

"They're in a pretty bad fix," said Bob, turning a tragic face to his friends. "I'll relay the S. O. S. call, and probably we'll reach ships that the *Horolusa's* wireless couldn't, as this station is so much more powerful. While I'm doing that, why don't you fellows call up the life saving station at Barnegat, and tell them to be on the lookout."

"That's a good idea!" exclaimed Joe, and he rushed for the telephone, while Bob sent out the call for help for the *Horolusa*.

"Central must be asleep!" exclaimed Joe impatiently. "I can't get any answer at all to this blamed thing," and he worked the hook up and down, but to no effect.

Meanwhile Bob had had better success with his instrument, and had got into communication with two ships that promised to go immediately to the aid of the *Horolusa*. They were both only a few miles from that unfortunate vessel, so when at

last Bob left the key, the load of anxiety that had lain so heavily on his heart was considerably lightened.

"What's the matter, Joe?" he inquired of his friend, who was still making frantic but ineffectual efforts to get into communication with the life saving station. "Can't you get any answer?"

"Not a word, worse luck!" exclaimed Joe. "I guess the wires must have been blown down by the storm."

"Yes, or they might have been cut by the thief before he attacked Mr. Harvey," suggested Herb, struck by a sudden thought.

"I'll bet that's just what's the trouble!" exclaimed Joe. "I'm going outside and investigate."

He caught up a flashlight that was lying on the table, and dashed outside, followed by the others. Sure enough, the telephone wires had been cut a few feet above the ground. Evidently the thief had planned everything carefully.

"Good night!" ejaculated Joe disgustedly. "No wonder I couldn't get any answer. And all the time I was blaming the poor operator for being asleep."

When the boys went inside again they found Brandon Harvey sitting up, and he declared that he felt a good deal better.

"I'll be as good as ever in a little while," he declared. "I guess I was in the land of dreams for a little while, though. What's been going on while I was down and out?"

The boys told him about the message from the *Horolusa* and about the telephone wires being cut.

"Well, I guess you've done about all that can be done," he remarked, after they had finished. "Chances are those two vessels you spoke will stand by the *Horolusa* and take the passengers off in case it becomes certain that she's going to founder. But I think I'm strong enough to push a key down now, if you'll help me over to the table."

This was soon done, and while the wireless man was still somewhat shaky, he nevertheless stated that he had recovered enough to carry on the duties of the station.

"You fellows don't need to worry about me," he said. "I'll hold down the station all right, if you want to go after this Cassey. You might be able to catch him before he leaves the town, because he didn't leave here in time to catch the last train out, and I doubt if he'd be able to hire an automobile on a night like this. It would be worth an attempt, anyway."

"It doesn't seem right to leave you here alone,"

said Bob doubtfully. "But I suppose you know best how you feel."

"We'll hook up the telephone before we go, and get a message through to the life saving station," said Joe.

The radio boys set about this task without loss of time. They soon had the instrument working again, and this time had no difficulty in getting a connection with the life saving station. The life savers reported that there was no vessel near the shoals at that time, but promised to keep a vigilant lookout.

"Well," said Bob, when this had been accomplished, "I suppose there isn't much more that we can do around here, so let's get after Cassey. We'll have to flash a lot of speed if we're going to stand any chance of catching him."

"I guess we can do that, all right," said Joe. "Let's go," and with that the boys were off on the trail of the thief.

CHAPTER XXII

IN THE GRIP OF THE STORM

THE *Horolusa* had left Norfolk with the sun shining, but after she had steamed a day on her way to Boston the weather changed, the sun becoming obscured by heavy clouds and the air growing sultry and heavy. The passengers took little note of this, except in a casual way, but the ships' officers wore a somewhat worried look as they went about their duties, for the barometer had been falling steadily all the morning and had now reached a low point that forecasted trouble, and that in the near future. The sea was calm, with a long, oily heave that soon sent a number of the passengers to the seclusion of their staterooms.

Dr. Dale and his party were fairly good sailors, however, and they stayed in a corner of the deck that they had preëmpted, and discussed the various happenings during the trip. Everybody had had an enjoyable time, and they could look back and think of a dozen pleasant incidents that had made the tour one to be remembered in after years.

"I think it was nothing short of an inspiration that led you to propose this trip, Doctor Dale," said Mrs. Layton. "I anticipated a good time, but I never imagined that it could be half so enjoyable as it has turned out to be."

"It has indeed been a memorable one," agreed the doctor. "In fact, it has been so very successful that I think we should take others from time to time. The change is good for all of us, too. Mrs. Dale claims to feel infinitely better than when we started, and I am sure we can all say the same thing."

"Yes, indeed," agreed Mrs. Plummer. "I hope the weather will continue as perfect as it has been so far, although it doesn't look very promising just at present."

"It has clouded over rather rapidly," said the doctor, surveying the gloomy sky. "But I hardly imagine it will amount to anything. It is very unlikely that we shall have a storm at this time of year, you know."

Even as he spoke a sharp puff of wind blew across the decks, whistled in the rigging, and died away. A few minutes later another gust came, this time a little stronger, and before they fairly realized it, a brisk breeze was blowing. Meanwhile, the cloudiness had deepened, and the sea was beginning to rise. Under the lowering sky the ocean turned a dull gray color, flecked by

little white caps as the breeze continually freshened.

By the time the dinner gong sounded, the little party was glad to go below decks out of the wind, which had a raw edge to it. The boat was now rolling and pitching considerably, and there was a comparatively scanty gathering around the long tables. Conversation was rather limited, and immediately after dinner the ladies of the party retired to their staterooms.

Dr. Dale and Mr. Layton went up on deck again, and they were astonished at the change which had taken place even in the short time they had been below.

The wind had risen to a gale, and was driving before it big rolling seas crested with foam. The vessel plowed into these, at times plunging her bows completely under and sending a flood of green water back over her decks as she rose and shook herself free of the weight of water. Life lines had been rigged about the decks, and without these it would have been almost impossible to get about at all. The doctor and Mr. Layton and a few other men sought the lee of a deck house, where they gazed out over the wild waste of waters with astonishment not unmixed with alarm. Still, they knew that their ship was a staunch one and that they had little to fear unless some unforeseen accident took place.

All that afternoon the ship wallowed and plunged through the angry seas, her speed reduced until she had only enough to keep her head into the wind. At times the stern would rise high in the air, until the propeller was lifted clear of the water, whereupon the engines would race madly for a few seconds before the stern went down and the propeller bit into the water once more. Everything moveable about the decks had been lashed down, or it would have been over the side long ago.

Darkness came early over the tossing waste of waters, and the men retired to the snug smoking room, where they discussed the storm in a desultory manner.

Those who felt so inclined had just risen to go to the dining room for supper when they were thrown back into their chairs by a shock that caused the vessel to shiver from stem to stern. It seemed to hesitate and stand still for a moment, and then started on again as though nothing had happened. Excited voices and footsteps were heard all over the ship, and those in the smoking room gazed at one another in consternation.

A few minutes later the engines stopped, and as her steerage-way slackened the great vessel fell into the trough of the waves, where she rolled and wallowed in a helpless manner.

"We'd better go and look after the ladies,"

said Dr. Dale. "I'm afraid something serious has happened."

Dr. Dale and Mr. Layton made their way with all possible speed to the staterooms occupied by the ladies, whom they found grouped together in the corridor anxiously awaiting their arrival.

Meanwhile events were moving quickly on the ship's bridge and in her wireless room. The *Horolusa* had struck a derelict, floating awash with the surface of the sea, and a big rent had been torn in her bows. The ship's officers realized at once the serious nature of the accident. The pumps were set going and the wireless man was instructed to send a call for assistance. For what seemed an age he repeated the S. O. S. call without receiving any answer, but at last his receiver buzzed, and he listened eagerly for the answer. But at once a puzzled look came over his face, and he turned to his fellow wireless man.

"Whoever's answering our message gives the call of the Ocean Point station, and yet it can't be either of the regular radio men there," he said. "This message is being sent by an amateur, I'll swear to that."

"Sounds that way," the other agreed, after listening to the head set a moment. "But you can tell by the strength of the signals that it can't be just an amateur station. Possibly the regular

operator is away or sick, and some amateur has taken his place."

"Well, he says he will relay our call, anyway," said the other. "Amateur or not, he seems to be on the job and doing the best he can for us. And Heaven knows we need all the help we can get, because we're in a bad way."

The *Horolusa* was indeed in sore straits. Her bow had settled low in the water and the big waves broke over it continually. The crew had made several attempts to launch the lifeboats, but the vessel was rolling so badly that they were smashed to splinters against her sides before they could reach the water. The wind howled wildly around the superstructure and in the rigging, and it was also raining heavily, soaking the shivering passengers to the skin as they stood huddled about the decks. Life preservers had been handed about and nearly everybody wore one of these.

High up in the wireless cabin the two operators could hear the call for help flashing out loud and clear from the powerful land station as it was repeated over and over by the unknown sender there. Little did Bob's father and mother suspect that their son was aware of their peril and was trying desperately to save their lives and those of the hundreds of other passengers on the big ship.

At last, after what seemed an interminable time to the anxious wireless men, they heard an answering call from some ship laboring through the black and stormy night, and a little while later they heard still another ship promise to go to their assistance.

"Glory be!" they exclaimed, in unison. "I hope they're not far away," said one. "I'm afraid the old *Horolusa* has taken her last voyage. If the forward bulkhead gives way, she'll go down like a shot."

"They can't make much speed in a sea like this, either," said the other anxiously. "But I see the YS station has stopped sending. I guess he must have heard those boats promise to come to our help. And they sure can't get here a bit too soon."

The *Horolusa* was indeed in a desperate condition. Below decks the engineer force was laboring mightily to brace the forward bulkhead so that it would stand against the tremendous pressure of the water without. The bulkhead was sagging inward, and even as the men labored they could see flakes of paint come off the iron as it bent inward. It took the highest kind of courage to work in the face of such peril, because they knew if the bulkhead once gave way they would be drowned under tons of water without any chance whatever to escape. They braced

big timbers against the frail wall that meant the only barrier between them and instant death.

"I guess that's about all we can do, men," said the chief engineer at length. "I'll call for a few volunteers to stay below and keep the pumps running, and the rest of you had better get up on deck. She's likely to go at any minute."

A few hardy souls volunteered, and the rest swarmed up the long iron ladders, thankful to get away from the awful menace of that bulging bulkhead. Arrived on deck, they found conditions there little better than those they had just left below. Several of the lifeboats had been wrecked by big seas, and the remainder had been stove in when the crew attempted to lower them down the side.

Dr. Dale's little party kept together, and they all did the best they could to encourage each other. The passengers had been informed that two vessels were coming to their assistance, but even to the inexperienced eye of a landsman it was evident that the *Horolusa* was settling steadily lower in the water. Big seas broke constantly over her bows and encroached further and further up the sloping decks as the passengers were driven steadily toward the stern. The ship's officers passed about the decks, keeping order and doing the best they could to reassure the passengers. The captain had ordered rockets sent

off from the bridge, and these soared aloft at intervals and cast a momentary light over the wild and endless succession of mountainous waves that seemed like a victorious army marching on a helpless city.

Dr. Dale offered up an earnest prayer for their safe deliverance from this terrible peril, in which all those within hearing joined; and it seemed indeed as though nothing short of divine interposition could save them from a watery grave.

The clank of the pumps resounded through the ship and sounded to the passengers like the knell of doom. The crew worked in relays, and as fast as one shift had toiled to the verge of exhaustion another group took their places. They worked with the energy of desperation, for they knew that they were fighting for their own lives as well as for those of the passengers.

In the meantime the engineers were risking their lives a dozen times over in trying to patch up the rent in the damaged bow of the boat. Some of them had been lowered over the side by means of ropes, and the sea dashed over them constantly as they sought to cover the rent with heavy canvas. If this could be done successfully it would keep out the bulk of the water, and the pumps might be able to keep the vessel going until the promised help arrived.

That help seemed an endless time in coming, but at length the captain's night glasses caught sight of a point of light upon the waves. It came nearer and nearer until it became evident that a ship was bearing down upon them. A great rocket soared into the air in answer to those sent up by the *Horolusa,* and in the light from it could be seen the outline of a large steamer that changed its course and swept around until it was parallel with the *Horolusa* and yet at a sufficient distance to prevent the vessels being driven into each other.

The roar of the storm prevented any call being heard from one captain to the other, but down in the wireless room the operators were busy and a plan of action was agreed upon. By this time the patch of sail had been fastened over the hole in the bow of the *Horolusa,* and she had ceased to settle in the water. With the sea shut out from the bow, the pumps speedily cleared out the water that was already in the hold of the ship and she was perceptibly rising in the water. If the patch held, the vessel might still be saved, or at least kept afloat until the sea calmed down, when permanent repairs could be made.

As the fate of the *Horolusa's* lifeboats had proved that it was impossible for small boats to live in such a sea, it was arranged that the *Falcon* as the rescuing vessel was named, would

stand by until morning or until the storm abated, and then either take the *Horolusa's* passengers aboard or try to help the vessel itself into port.

Two hours later the lights of another vessel loomed above the horizon and the steamer *Esperanto* came hurrying to help. She too offered to stand by and give every assistance in her power.

The relief of the passengers of the *Horolusa,* who for hours had been gazing into the very eyes of death, were beyond the power of words to express. When Dr. Dale, who had visited the wireless room, came back to report that the S. O. S. message that had brought the two vessels to their aid had been relayed from Ocean Point the wonder of those from Clintonia broke out in exclamations.

"And a curious thing," the doctor added, "is that the operators feel sure that the call was sent by amateurs. There was something about it—something halting, uncertain—that made them sure it didn't come from a professional. Perhaps—who knows?—it may have been Bob or Joe whose message saved the ship!"

"If we are really saved," came with a shudder from Mrs. Layton. "If only the storm were over!"

"And we were safe on land," added Mrs. Plummer.

She had scarcely spoken when the steamer gave a mighty heave and they heard the rush of water over her bow.

"We're sinking! We're sinking!" came a scream from one frightened passenger.

"Not yet," added another quickly. "But it looks mighty bad."

CHAPTER XXIII

FROM THE JAWS OF DEATH

It was in a tumult of excitement that the radio boys started out to run down Dan Cassey, who they felt sure was the rascal who had assaulted Brandon Harvey and robbed the safe. They were, too, in a frenzy of apprehension about the fate of their parents and friends out on the stormy sea.

Still they had been relieved to some extent by the assurances that vessels were hastening over the wild wastes of water to the help of the imperiled ship and by the knowledge that all had been done that could be done under the circumstances. It seemed to them that it was now clearly their duty to assist in the running down of a criminal who had made such a dastardly attack upon one of their best friends.

Their task was made the harder by the blackness of the night and the fury of the storm. The gale had risen in violence until it had reached nearly a hundred miles an hour. It buffeted

them about, and at times turned them completely around. Fortunately the sand was sodden with rain, otherwise the boys would have been choked and blinded by the flying particles.

But the rain that helped them in this respect hindered them in another, for it drenched their clothes and made them cling close to their skins so that rapid progress was made almost impossible.

"Never mind, fellows," Bob shouted. "The same things that are bothering us are bothering Cassey too. But there's no use in our all sticking close together. Let's spread out like a fan, and if one of us doesn't come across him, another may. The first fellow that catches sight of him can let out a shout and we'll all close in. Come ahead now, fellows. Speed's the word."

They set out with redoubled determination and made their way the best they could against the fury of the elements. The din created by the roaring of the gale and the thunderous beating of the surf upon the beach was beyond description. It was like the roar of a dozen Niagaras, and fairly deafened the boys as they plowed along with heads down against the storm. And if it was as terrible as this on land, where at least they were safe, what must it be on the howling waste where was tossing at this moment the crippled ship that held their loved ones.

In the mind of each was that same vision—that ship a mere speck on the mighty waters, as helpless as a bird with a broken wing, utterly at the mercy of the giant of the storm.

Yet not utterly, thank God! The wonderful radio had flashed its message through the black night, had reached out over the mighty waves, had gone to one ship and said "Come," had gone to still another and said "Come," perhaps to still another and still another, always with the same message "Come! A comrade is in danger. I'll lead you to him. Come! Come quickly!"

And one gallant ship had heard and answered; and still another had heard and turned its prow in the direction of the sinking vessel, and by this time perhaps others were tearing through the waves toward the helpless craft that the ocean threatened to engulf.

This was the hope that buoyed up the comrades and kept them from despair as they hurried as fast as they could through the Egyptian darkness of the night.

The path that they were following, or rather the direction in which they were going—for in that blackness no path could be seen—was toward the bungalow colony, beyond which lay the town. It was their plan to go straight on to the town, if they were not successful in coming up with Cassey before they got there, and send out a de-

scription of the scoundrel to all near-by towns and warn the authorities to be on the alert to apprehend him.

Between the radio station and the bungalow colony was a little inlet into which the sea ebbed and flowed with the movement of the tide. It was from fifty to sixty feet wide, and a bridge stretched across it at a height of twenty feet above the water.

The inlet, or cove, was a comparatively quiet place and was much frequented by the boys, and indeed all the members of the bungalow colony, for fishing and paddling about in rowboats and canoes, craft that would have been too frail for the open sea.

"Must be getting pretty near the bridge, don't you think, fellows?" asked Bob, after they had got some distance from the radio station.

"Seems so to me," replied Joe. "Though in this darkness you can hardly see your hand before your face."

"We've got to be mighty careful and watch our step, or one of us will be tumbling in," said Herb. "And while I'm fond enough of bathing as a rule, I want to go in of my own accord."

"I guess we'll have to depend on our ears instead of our eyes to warn us when we're getting close," replied Joe. "And from what I think I hear, our ears will be quite sufficient. Listen!"

The boys stood still for a moment, and then they all heard a sibilant, shrill, hissing sound that was entirely distinct from the beating of the surf along the shore.

"That's something new," remarked Bob. "We didn't hear that when we came from the colony a little while ago."

"No," replied Joe. "But in the meantime the ocean has been getting in its work and has forced its way into the inlet. From the sound, the water's rushing through there like a mill race. And it's all the fiercer because the channel is so narrow. I guess Herb was right when he said we'd have to watch our step."

"Let's all keep close together until we've got on the other side," suggested Bob. "It seems to me that I can see the outline of the bridge just a little way ahead."

By advancing slowly, step at a time, they found their way to the entrance to the bridge and Bob heaved a sigh of relief as his hand rested on the railing.

"Here we are all right," he said. "Now follow close in Indian file."

"The inlet has surely gone on a rampage," Joe remarked. "Just hear the way the water goes tearing along. And from the sound it isn't so far below the level of the bridge. Don't let's

dawdle, fellows. I for one will feel a mighty sight better when we get on the other side."

The others felt the same way, and all quickened their steps. Nor was their apprehension allayed by the way the bridge shook and quivered beneath their feet.

They had nearly reached the middle of the span when an ominous cracking was heard.

"Quick, fellows, quick!" shouted Bob. "The bridge is breaking. Run for your lives!"

He sprang forward like a deer and the others followed him pellmell. They could feel the bridge giving way beneath them, and the hiss of the water was drowned by the horrid roar of crashing timbers. One last frantic rush and they cleared the bridge and felt the solid ground beneath their feet.

They were not an instant too soon. Even as their feet left the planking there was a splintering crash and the bridge parted in the middle. The ends still clung to the abutments on either side, but the central portions fell into the stream, where they were swung to and fro by the force of the current so violently that it seemed that but a short time would elapse before the ends also would be torn loose from the banks and the whole structure swept down toward the sea.

Cold chills chased each other up and down the

boys' spines as they realized what a narrow escape they had had from being engulfed in those raging waters.

"That was a close call," panted Bob, as he took out his handkerchief and wiped the perspiration from his face.

"I'll tell the world it was," agreed Joe.

"Another five minutes, yes, another five seconds, and we'd have gone down with it," said Herb. "And I hate to think what it would mean to be fighting for life in that whirlpool."

"Well, we didn't go down, thank Heaven," rejoined Bob. "And a miss is as good as a mile. But where's Jimmy?" he asked suddenly, as he saw that only two were standing beside him.

"Why, he must be right around here," replied Joe, peering into the darkness on either side. "I suppose he's sitting down for a minute to get his breath. Jimmy," he called.

There was no answer.

An awful fear clutched at the boys' hearts.

"He's trying to scare us," ventured Herb, but without much conviction in his tones.

"Jimmy! Jimmy!" called Bob. "Don't frighten us, old scout. Where are you?"

Again that dead, terrible silence.

Then, so thin and weak that it sounded as though from a great way off, they heard Jimmy's voice.

"Help! Help!"

"He's down in the water," cried Joe.

"He didn't get off the bridge in time," Herb shrieked, in an agony of apprehension.

The three boys rushed to the bank and peered down into the dense darkness where the only light they could discern came from the white spray that crested the waves of the raging torrent.

"Jimmy!" Bob shouted at the top of his voice. "Where are you?"

"I'm down here in the water," came Jimmy's voice. "I'm holding on to the broken end of the bridge. But I can't hold on much longer. Hurry up, fellows, or I'm a goner."

The boys were frantic with excitement.

"Hold on, Jimmy!" yelled Bob. "Hold on, for the love of Pete! We'll get you!"

But how?

The broken part of the bridge hung almost perpendicularly for a distance of nearly twenty feet before it reached the water. The rain had made it as slippery as glass. The end on the bank was grinding at its supports and threatened every moment to tear loose and fall into the stream.

All these things Bob took in, in a flash.

"There's only one way," he said grimly. "And I'm going to take it. I'm going to work my way down and try to get him."

"Let me go," put in Joe, but Bob was off before any one could stop him.

He threw himself down flat on the bridge and began to work his way down backward on his hands and knees. The slope was so steep that it was like going down a ladder, with the difference that with a ladder he would have had rungs on which he could have planted his feet solidly, while here he had to dig his fingers and toes into every crevice he could find to keep himself from sliding down into the abyss of waters. Foot by foot, with infinite care and caution, he let himself down, keeping his eyes shut so that the sight of the madly racing waters beneath him should not make him dizzy and force him to let go his hold.

"I'm coming!" he shouted. "Hold on. I'm coming. I'll be with you in a minute."

"I'll try to, but my arm is getting numb," answered Jimmy. "Hurt it when I went down, I guess. My fingers are slipping. Hurry."

A flash of lightning came just then, and Bob, looking over his shoulder, caught a glimpse of Jimmy's face, usually so ruddy, but now ghastly white. His body was in the water and swung to and fro, while one hand clung desperately to a part of the broken bridge railing from which the waves were trying to wrench him.

"I'm going," cried Jimmy despairingly. "Oh, Bob, hurry!"

"Hold on," shouted Bob. "Hold on just one second more!"

He reached his comrade just as Jimmy's cramped fingers were torn from their support. Like lightning, Bob's arm shot out and grasped Jimmy's wrist.

"I've got you, old boy," he shouted. "Just try to keep your head above water and I'll pull you out."

With one arm thrown over the railing of the bridge to give him purchase, he pulled Jimmy toward him with all his strength. The current tugged at Jimmy's body like a ravenous beast unwilling to be balked of its prey. But although the muscles of Bob's arm felt as though they would break, the indomitable will behind them had its way, and inch by inch he drew Jimmy in until the latter was able to get hold of the swaying planks and lessen in part the strain. Then with infinite care and the utmost exertion of his strength, he half helped, half lifted Jimmy out on the planking, where he lay exhausted and gasping.

CHAPTER XXIV

A TERRIBLE PLIGHT

For a few moments both boys were so used up by the terrific mental and physical strain they had been through that they were unable to move. But the danger was still imminent, and how great it was they learned through a call that came from above.

"Hurry up, fellows," came from Joe. "The bridge is giving way up here and the whole thing may go down any minute. I'm coming down to help you get Jimmy up."

"No, don't do that," cried Bob, rousing himself to fresh exertions. "Your weight down here would only help to pull the bridge down the quicker. You and Herb stand by to give us a hand when we get near the top."

"Now, Jimmy," he continued, turning to his comrade, "we've got to brace and get up to the top somehow just as soon as we can. You crawl up alongside of me, grabbing anything you can find to give a hold to your fingers in the cracks of

the planking, and I'll boost you along just as much as I can."

Jimmy summoned up the last remnants of his strength, and they commenced their arduous climb up the slippery planks of the bridge.

It was like a nightmare. They would advance a little and then slip back, losing sometimes as much as they had gained. But they kept on with an energy born of desperation. As often as Bob found a secure grip with his right hand, he would reach out with his left and give Jimmy a vigorous boost upward and forward. Every second now was precious, for they could tell from the grinding noise above and the increased swaying of the bridge that its lasts supports were rapidly giving way. Yet despite their utmost endeavor, they were only gaining inches when they should have been gaining feet.

"Buck up, Jimmy," Bob encouraged his comrade, though his own strength was fast ebbing. "We've only got six feet more to go."

"Not that much," cried a voice that they recognized as Joe's, and the next instant a pair of vigorous arms reached out and two strong hands gripped Jimmy's wrists.

Joe had thrown himself flat, head downward, from the top of the bridge, while Herb at the top held on to his heels.

"Leave Jimmy to me," commanded Joe.

"We'll swing him up and then we'll give you a hand. Pull away, Herb."

Herb, with his feet braced in two deep holes he had dug in the sand, pulled with all his might until Joe's knees were over the top, thus giving him a purchase. The next instant they had Jimmy up and lying on his back on the bank.

Bob in the meantime, relieved of his care for Jimmy, had got close to the top. Joe rushed to him, caught one of his arms with his two and pulled him off the bridge just as the last support gave way and the whole structure, with a hideous crash, went down into the boiling torrent.

For a little while not one of the boys could speak. They had been engaged in a fight with death and they had conquered only by the narrowest of margins. They were spent and breathless, but above all they were supremely grateful.

When at last they had recovered somewhat, they turned their attention to Jimmy, who had been the greatest sufferer in the events of that never to be forgotten night.

"How are you feeling now?" asked Bob, as he clapped the stout boy affectionately on the shoulder.

"About as though I had been drawn through a knothole," replied Jimmy, trying to grin. "I'm as sore as an aching tooth all over, but I guess there are no bones broken. I'm bruised

most in my feelings, I reckon. Don't see any signs of my hair having turned white, do you?" he joked.

"No," laughed Bob. "Though in this darkness I couldn't tell whether it was white or black. But you went through enough to turn it white, I'll vouch for that."

"Not much more than you went through for me," replied Jimmy gratefully. "I'll never forget as long as I live, Bob, how you took your life in your hands to come to my help."

"Oh, forget it," returned Bob lightly. "It's just exactly what any one of you fellows would have done for me if I'd been in the same fix. I tell you, Jimmy, our hearts stood still for a minute when we found you weren't with us."

"It all happened so quickly that I don't know just yet how I came to be hanging on to that bit of railing," said Jimmy. "I can just remember a fearful crash, and then I went tumbling down with the same feeling at the pit of my stomach that you feel when you drop down fast in an elevator. Then the water closed in over me, and I just reached out wildly and caught hold of something and held on for dear life. I called out two or three times before you heard me. The water was making such a fearful racket that it's a wonder you heard me at all."

"We'd have come down as soon as we missed

you on a chance of finding you, even if we hadn't heard you at all," replied Bob. "But we sure had a close call. That was a dandy idea of Joe's and Herb's of forming a human chain. If they hadn't done it, we would have gone down with the bridge."

"Well, now that we're safe and sound, let's get after Cassey," suggested Jimmy. "We're losing time staying here."

Bob laughed outright, and Joe and Herb joined in.

"You sure have kept your grit, Jimmy, old boy," said Bob admiringly. "But you've done all the chasing after Cassey that you're going to do to-night. It's you for the bungalow and bed just as fast as we can get you there. Then the rest of us will keep up the hunt for that rascal."

Jimmy protested strongly that he was as well as ever, but when he got on his feet he was so weak and trembling from his terrible experience that he could scarcely stand. So he had to give in, and with the other boys supporting him he made his way painfully and slowly to his parents' bungalow.

Their arrival created a sensation with Mrs. Fennington and the girls, who were deeply concerned when they heard of the strenuous doings of the night. Jimmy was taken in charge at once

and put to bed. There was grief and consternation also when they heard of the plight of the *Horolusa* and her precious freight, but the boys allayed this as much as possible by the reassuring news that other vessels had been signaled and were hurrying to her assistance.

"And now," said Bob, after they had briefly recounted the news, "we still have a lot of work to do and we must be off. We're going to head off that Cassey if possible, and then we're going back to the wireless station. We'll let you know all that happens just as soon as we can."

With many adjurations to be careful ringing in their ears, they hurried out. Once again in the open, they hastily laid out the plan of their further campaign.

"Suppose, Herb, you go right on to the police station," suggested Bob. "Tell them just what has happened and urge them to get busy in sending out messages to surrounding towns and try to have Cassey rounded up. In the meantime, Joe and I will go to the garages and try to find out whether Cassey has been to any of them trying to get a car. That would be the thing he'd most likely do, since there are no trains that he could get away on."

They all made haste, and in a few minutes reached the town. Herb made a bee line for

police headquarters, while Bob and Joe hurried to make inquiries in the three garages of which the town boasted.

At the first two they got no clue. But they were luckier at the third.

"Any one inquiring for a car?" repeated the owner of the garage. "Yes, there was one fellow not fifteen minutes ago. Wanted to get to Allendale, where he said he could catch a train."

"Did the man stutter?" asked Bob eagerly.

"Should say he did!" replied the garage owner, grinning. "Got so tangled up that he had to whistle to go on."

"Cassey!" cried the boys in one breath.

CHAPTER XXV

THE FIGHT IN THE DARK

THE man looked at them curiously.

"Friend of yours?" he questioned.

"Friend!" exclaimed Bob. "He's a thief, and it's only luck that he isn't a murderer. He blackjacked Mr. Harvey over at the radio station and got away with a pile of money. Which way did he go?"

"Over in the direction of Allendale," replied the man, pointing out into the darkness. "So he's a thief, is he? If I had known that I'd have nabbed him. That explains why he was so excited. He offered me any money for a car, but mine were all out at the time."

"I tell you what!" said Bob. "We've got to get that man and we can't waste a minute. Suppose you go to the police station and tell them what you know and have them call up the Allendale police and tell them to be on the watch for a man that stutters."

"I'll do that, sure," replied the man, and immediately suited the action to the word.

"Come along, Joe," cried Bob, and they both plunged into the darkness, following the direction that the man had pointed out.

Cassey had had a fifteen-minute start, but the distance to Allendale was nearly four miles, and the boys had no doubt that they would be able to overcome that handicap, provided Cassey kept to one of the two roads by which it was possible to reach the town. Those roads ran nearly parallel for quite a distance, separated at places by a quarter of a mile and at others by half a mile, but joining each other about half a mile before Allendale was reached.

"Of course, we don't know just which road Cassey has taken, and if we stick to either one we may make the wrong guess," said Bob. "So it will be good dope for us to separate and each take one of the roads. If either of us gets the skunk he can give our regular yodel call and the other one can come hurrying to him across the fields. We'll never be more than half a mile from each other."

Joe assented to this and took the road that ran almost parallel to but at the left of the one that Bob was following.

The rain by this time had diminished somewhat in violence, but the roads were muddy and progress for Bob was slow. It was so dark that it

was impossible to choose one's footing, and he had to splash along as best he could.

On a night like that no one was abroad that was not compelled to be, and the road was completely deserted. For the first mile there was nothing to indicate that Bob was anywhere near his quarry. And he had almost covered a second mile before he thought that he could hear footsteps splashing along in front of him.

He quickened his pace, and the sound of steps ahead grew louder. But that his own steps could also be heard by the fugitive was indicated by the sudden cessation of the noise in front.

Had Cassey, if he were indeed the man in front, stopped? Was he hiding until his pursuer had passed? Was he lying in wait to brain him as he came along?

All these reflections passed through Bob's mind like a flash. And he too stopped for a moment while he pondered his course of action.

For less than a minute he hesitated. Then he moved forward. Anything was better than inaction. If his enemy was lying in wait for him and they came to handgrips—well, that was what he was looking for. All he asked was a chance to lay his hands on the villain who had assaulted and narrowly escaped killing his friend. Boy as he was, he was as tall and muscular as many a

man, and he was willing to take his chance.

He had gone perhaps a hundred feet when nature came to his aid. There was a terrific clap of thunder, and the lightning flash that followed flooded all the landscape with light.

There at the side of the road, not ten feet from him, was Cassey, trying to climb a fence. His intent was obvious—to steal off through the fields while his pursuer was vainly hunting him along the road.

With a shout Bob leaped toward him. He covered the ground in two jumps, caught Cassey by the coat, and yanked him back to the ground.

With a savage snarl the rascal drew a blackjack and aimed a blow at Bob's head that would certainly have knocked him out had it landed. But with pantherlike swiftness Bob leaped aside, and as Cassey tried to regain his balance, Bob's fist shot out with terrific force and caught Cassey right on the point of the jaw. Cassey went down in the mud, and in an instant Bob was on top of him and had wrenched the weapon from his hand.

"Now, Cassey," Bob commanded, emphasizing his words by a tap with the blackjack, "keep quiet or I'll give you a crack with this that will send you to the land of dreams. Understand?"

That Cassey understood was shown by the fact

that he instantly ceased to struggle and lay limp beneath his captor, who sat astride of him.

Keeping the weapon ready for instant use and not taking his eyes from his captive, Bob lifted up his voice in the yodel call that had been agreed upon between him and Joe. The shrill call carried far, and Bob had no doubt that it would be heard.

Knowing that force was of no avail, Cassey resorted to pleading.

"L-l-let me g-go," he begged. "I'll g-g-give you a th-th-thousand dollars if you l-let me go."

"Keep still, you skunk," ordered Bob. "Do you think I'm a crook like yourself?"

"I'll m-m-m-make it two th-th-thousand," stuttered Cassey.

"Not if you made it a hundred thousand," replied Bob. "I've got you, Cassey, and you won't get off this time as easily as you did when you tried to rob an orphan girl. It's you for jail, and you'll stay a good long while where the dogs won't bite you."

At intervals Bob repeated his call in order to guide his friend, and in a few minutes there was a crashing of the bushes and Joe stood at his side, almost breathless with the haste he had made.

"What is it, Bob?" he asked, peering down on the prostrate form of Cassey, on which Bob was still sitting.

"I have met the enemy and he is ours," answered Bob exultingly. "I'm afraid he's a little out of breath from my sitting on him. So just slip off your belt, Joe, and fasten his feet together and then I can get up and stretch my legs."

It took but a minute for Joe to pinion Cassey's feet securely, and then Bob got up. He told Joe briefly what had taken place.

"There's just one thing to do, Joe," Bob concluded. "You streak it for town and bring a policeman and we'll turn this fellow over to him. In the meantime I'll stand guard—Hello, what's that?"

There was a glare of light from the lamps of an automobile that was coming from the direction of Ocean Point. The car had just turned a curve in the road a hundred yards away and was bearing down upon them rapidly.

Both boys leaped into the center of the road and waved their hands. The driver of the car saw the boys and slowed down, and as the car came to a stop Herb jumped down and ran toward them.

"We've got Cassey," shouted Bob.

"Glory hallelujah!" cried Herb. "I got this car and came after you, and I've got a couple of policemen with me. Where is the rascal?"

They dragged Cassey to his feet and delivered

him into the care of the two officers, who had followed close on Herb's heels. They bundled him into the car and the whole party drove rapidly back to town. There the rascal was searched, and the whole amount of the theft was found stowed away in his pockets. The money was taken in charge by the proper officials to be delivered to Brandon Harvey in the morning, and Cassey was dragged off to a cell. Then the boys left the station, with their cheeks burning from the praise that was heaped on them by the authorities for their quick-wittedness and bravery.

"Such a night!" exclaimed Bob, as the boys took their seats in the car which they had retained to carry them over to the radio station.

"We'll never have such an exciting one again as long as we live," declared Joe emphatically.

But he was mistaken, as will be seen in the next volume of this series, entitled: "The Radio Boys at the Sending Station; Or, Making Good in the Wireless Room."

As the bridge was down they had to skirt the head of the inlet to reach the radio station. There they found Mr. Harvey, still badly shaken by the attack, but steadily getting better. His cousin, Frank Brandon, who had been notified of the trouble, was with him and was attending to the duties of the station.

Both men leaped to their feet as the boys entered. The sight of the three happy faces told its own story.

"We got him!" cried Bob. "Nailed him on the road between here and Allendale. And we've got back every cent of the money."

Infinite relief dawned in Brandon Harvey's eyes as he shook hands with the boys and thanked them again and again.

"You've given me a new lease of life," he cried. "And now I've got some good news for you in return. The *Horolusa* is safe. The leak is patched up, the *Falcon* and *Esperanto* are standing by, and the storm is subsiding. In a day or two your folks will again be with you, safe and sound at Ocean Point."

Then jubilee broke loose and the boys fairly danced about the room in their relief and delight.

"How can we ever thank you enough!" cried Bob.

"Don't thank me," returned Harvey. "I did a little, but you did more. For don't forget that it was your message that saved the ship."

THE END

THE TOM SWIFT SERIES

By VICTOR APPLETON

UNIFORM STYLE OF BINDING. INDIVIDUAL COLORED WRAPPERS.

These spirited tales, convey in a realistic way, the wonderful advances in land and sea locomotion. Stories like these are impressed upon the memory and their reading is productive only of good.

TOM SWIFT AND HIS MOTOR CYCLE
TOM SWIFT AND HIS MOTOR BOAT
TOM SWIFT AND HIS AIRSHIP
TOM SWIFT AND HIS SUBMARINE BOAT
TOM SWIFT AND HIS ELECTRIC RUNABOUT
TOM SWIFT AND HIS WIRELESS MESSAGE
TOM SWIFT AMONG THE DIAMOND MAKERS
TOM SWIFT IN THE CAVES OF ICE
TOM SWIFT AND HIS SKY RACER
TOM SWIFT AND HIS ELECTRIC RIFLE
TOM SWIFT IN THE CITY OF GOLD
TOM SWIFT AND HIS AIR GLIDER
TOM SWIFT IN CAPTIVITY
TOM SWIFT AND HIS WIZARD CAMERA
TOM SWIFT AND HIS GREAT SEARCHLIGHT
TOM SWIFT AND HIS GIANT CANNON
TOM SWIFT AND HIS PHOTO TELEPHONE
TOM SWIFT AND HIS AERIAL WARSHIP
TOM SWIFT AND HIS BIG TUNNEL
TOM SWIFT IN THE LAND OF WONDERS
TOM SWIFT AND HIS WAR TANK
TOM SWIFT AND HIS AIR SCOUT
TOM SWIFT AND HIS UNDERSEA SEARCH
TOM SWIFT AMONG THE FIRE FIGHTERS
TOM SWIFT AND HIS ELECTRIC LOCOMOTIVE

GROSSET & DUNLAP, PUBLISHERS, NEW YORK

THE MOVING PICTURE BOYS SERIES

BY VICTOR APPLETON

UNIFORM STYLE OF BINDING. INDIVIDUAL COLORED WRAPPERS.

Moving pictures and photo plays are famous the world over, and in this line of books the reader is given a full description of how the films are made—the scenes of little dramas, indoors and out, trick pictures to satisfy the curious, soul-stirring pictures of city affairs, life in the Wild West, among the cowboys and Indians, thrilling rescues along the seacoast, the daring of picture hunters in the jungle among savage beasts, and the great risks run in picturing conditions in a land of earthquakes. The volumes teem with adventures and will be found interesting from first chapter to last.

THE MOVING PICTURE BOYS
THE MOVING PICTURE BOYS IN THE WEST
THE MOVING PICTURE BOYS ON THE COAST
THE MOVING PICTURE BOYS IN THE JUNGLE
THE MOVING PICTURE BOYS IN EARTHQUAKE LAND
THE MOVING PICTURE BOYS AND THE FLOOD
THE MOVING PICTURE BOYS AT PANAMA
THE MOVING PICTURE BOYS UNDER THE SEA
THE MOVING PICTURE BOYS ON THE WAR FRONT
THE MOVING PICTURE BOYS ON FRENCH BATTLEFIELDS
MOVING PICTURE BOYS' FIRST SHOWHOUSE
MOVING PICTURE BOYS AT SEASIDE PARK
MOVING PICTURE BOYS ON BROADWAY
THE MOVING PICTURE BOYS' OUTDOOR EXHIBITION
THE MOVING PICTURE BOYS' NEW IDEA

GROSSET & DUNLAP, PUBLISHERS, NEW YORK

THE BOYS OF COLUMBIA HIGH SERIES

By GRAHAM B. FORBES

Never was there a cleaner, brighter, more manly boy than Frank Allen, the hero of this series of boys' tales, and never was there a better crowd of lads to associate with than the students of the School. All boys will read these stories with deep interest. The rivalry between the towns along the river was of the keenest, and plots and counterplots to win the champions, at baseball, at football, at boat racing, at track athletics, and at ice hockey, were without number. Any lad reading one volume of this series will surely want the others.

THE BOYS OF COLUMBIA HIGH
Or The All Around Rivals of the School

THE BOYS OF COLUMBIA HIGH ON THE DIAMOND
Or Winning Out by Pluck

THE BOYS OF COLUMBIA HIGH ON THE RIVER
Or The Boat Race Plot that Failed

THE BOYS OF COLUMBIA HIGH ON THE GRIDIRON
Or The Struggle for the Silver Cup

THE BOYS OF COLUMBIA HIGH ON THE ICE
Or Out for the Hockey Championship

THE BOYS OF COLUMBIA HIGH IN TRACK ATHLETICS
Or A Long Run that Won

THE BOYS OF COLUMBIA HIGH IN WINTER SPORTS
Or Stirring Doings on Skates and Iceboats

12mo. Illustrated. Handsomely bound in cloth, with cover design and wrappers in colors.

GROSSET & DUNLAP, PUBLISHERS, NEW YORK

THE OUTDOOR CHUMS SERIES

By CAPTAIN QUINCY ALLEN

The outdoor chums are four wide-awake lads, sons of wealthy men of a small city located on a lake. The boys love outdoor life, and are greatly interested in hunting, fishing, and picture taking. They have motor cycles, motor boats, canoes, etc., and during their vacations go everywhere and have all sorts of thrilling adventures. The stories give full directions for camping out, how to fish, how to hunt wild animals and prepare the skins for stuffing, how to manage a canoe, how to swim, etc. Full of the spirit of outdoor life.

THE OUTDOOR CHUMS
Or The First Tour of the Rod, Gun and Camera Club.

THE OUTDOOR CHUMS ON THE LAKE
Or Lively Adventures on Wildcat Island.

THE OUTDOOR CHUMS IN THE FOREST
Or Laying the Ghost of Oak Ridge.

THE OUTDOOR CHUMS ON THE GULF
Or Rescuing the Lost Balloonists.

THE OUTDOOR CHUMS AFTER BIG GAME
Or Perilous Adventures in the Wilderness.

THE OUTDOOR CHUMS ON A HOUSEBOAT
Or The Rivals of the Mississippi.

THE OUTDOOR CHUMS IN THE BIG WOODS
Or The Rival Hunters at Lumber Run.

THE OUTDOOR CHUMS AT CABIN POINT
Or The Golden Cup Mystery.

12mo. Averaging 240 pages. Illustrated. Handsomely bound in Cloth.

GROSSET & DUNLAP, PUBLISHERS, NEW YORK

THE MOVING PICTURE GIRLS SERIES

By LAURA LEE HOPE

Author of "The Bobbsey Twins Series."

12mo. BOUND IN CLOTH. ILLUSTRATED. UNIFORM STYLE OF BINDING

The adventures of Ruth and Alice DeVere. Their father, a widower, is an actor who has taken up work for the "movies." Both girls wish to aid him in his work and visit various localities to act in all sorts of pictures.

THE MOVING PICTURE GIRLS
Or First Appearance in Photo Dramas.

Having lost his voice, the father of the girls goes into the movies and the girls follow. Tells how many "parlor dramas" are filmed.

THE MOVING PICTURE GIRLS AT OAK FARM
Or Queer Happenings While Taking Rural Plays.

Full of fun in the country, the haps and mishaps of taking film plays, and giving an account of two unusual discoveries.

THE MOVING PICTURE GIRLS SNOWBOUND
Or The Proof on the Film.

A tale of winter adventures in the wilderness, showing how the photo-play actors sometimes suffer.

THE MOVING PICTURE GIRLS UNDER THE PALMS
Or Lost in the Wilds of Florida.

How they went to the land of palms, played many parts in dramas before the camera; were lost, and aided others who were also lost.

THE MOVING PICTURE GIRLS AT ROCKY RANCH
Or Great Days Among the Cowboys.

All who have ever seen moving pictures of the great West will want to know just how they are made. This volume gives every detail and is full of clean fun and excitement.

THE MOVING PICTURE GIRLS AT SEA
Or a Pictured Shipwreck that Became Real.

A thrilling account of the girls' experiences on the water.

THE MOVING PICTURE GIRLS IN WAR PLAYS
Or The Sham Battles at Oak Farm.

The girls play important parts in big battle scenes and have plenty of hard work along with considerable fun.

GROSSET & DUNLAP, PUBLISHERS, NEW YORK

THE GIRLS OF CENTRAL HIGH SERIES

By GERTRUDE W. MORRISON

12mo. BOUND IN CLOTH. ILLUSTRATED. UNIFORM STYLE OF BINDING.

Here is a series full of the spirit of high school life of today. The girls are real flesh-and-blood characters, and we follow them with interest in school and out. There are many contested matches on track and field, and on the water, as well as doings in the classroom and on the school stage. There is plenty of fun and excitement, all clean, pure and wholesome.

THE GIRLS OF CENTRAL HIGH
Or Rivals for all Honors.

A stirring tale of high school life, full of fun, with a touch of mystery and a strange initiation.

THE GIRLS OF CENTRAL HIGH ON LAKE LUNA
Or The Crew That Won.

Telling of water sports and fun galore, and of fine times in camp.

THE GIRLS OF CENTRAL HIGH AT BASKETBALL
Or The Great Gymnasium Mystery.

Here we have a number of thrilling contests at basketball and in addition, the solving of a mystery which had bothered the high school authorities for a long while.

THE GIRLS OF CENTRAL HIGH ON THE STAGE
Or The Play That Took the Prize.

How the girls went in for theatricals and how one of them wrote a play which afterward was made over for the professional stage and brought in some much-needed money.

THE GIRLS OF CENTRAL HIGH ON TRACK AND FIELD
Or The Girl Champions of the School League

This story takes in high school athletics in their most approved and up-to-date fashion. Full of fun and excitement.

THE GIRLS OF CENTRAL HIGH IN CAMP
Or The Old Professor's Secret.

The girls went camping on Acorn Island and had a delightful time at boating, swimming and picnic parties.

GROSSET & DUNLAP, PUBLISHERS, NEW YORK

THE RADIO BOYS AT OCEAN POINT

ALLEN CHAPMAN

Grosset & Dunlap